Final Program

twitter Follow the Mohs College Annual Meeting on Twitter! Twitter.com/mohscollege

Chicago

44th Mohs College Annual Meeting
Thursday, May 3 – Sunday, May 6, 2012
Fairmont Millennium Park • Chicago, IL
http://www.mohscollege.org/annualmeeting

44TH Mohs College Annual Meeting
MAY 3-6, 2012 — CHICAGO, IL
FAIRMONT MILLENNIUM PARK

ACMS

A protective barrier that adds strength and inhibits bacteria

Adds 75% More Strength[1]

Shown in Vitro to inhibit Gram Positive and Gram Negative Bacteria[1+]

Microbial Barrier With >99% Protection[2]

INTRODUCING

DERMABOND ADVANCED™ Topical Skin Adhesive

Ergonomically designed device

Advanced silicone technology for easy activation and expression of adhesive

Faster drying time in a single layer application*

.7mL formulation to close wounds up to 15cm

Embedded initiator technology to avoid clogging

Innovative design for controlled fine and wide line application

*Compared to DERMABOND® Topical Skin Adhesive

- **When used in addition to sutures, was shown ex vivo to add 75% more strength to the wound closure than sutures alone[1]**
- **DERMABOND ADVANCED™ demonstrated in vitro inhibition of gram-positive bacteria (MRSA and MRSE) and gram-negative bacteria (*E Coli*)[1+]**
- **Creates a microbial barrier with >99% protection in vitro for at least 72 hours against organisms commonly responsible for SSIs[2]**

ETHICON™
DERMABOND ADVANCED™
TOPICAL SKIN ADHESIVE

1. Data on file. Ethicon, Inc . 2. Bhende S, Rothenburger S, Spangler DJ, Dito M. In vitro assessment of microbial barrier properties of DERMABOND® Topical Skin Adhesive. *Surg Infect. 2002;3(3):251 257.*

[1+]Clinical significance is unknown

Final Program

Photos courtesy of the Chicago Visitors Bureau and Fairmont Millennium Park

Photography Policy

The ACMS has arranged for a photographer to be present throughout the 2012 Annual Meeting. ACMS may use these photos on its World Wide Web site or in other official printed publications. Individuals photographed will not receive compensation for the use and release of these photos and will be deemed to have consented to the use and release of photos in which they appear. Individuals also acknowledge ACMS' right to crop or treat the photographs at its discretion. If you are opposed to being photographed, please immediately notify the photographer or an ACMS staff member if your picture is taken. Thank you for your cooperation.

44TH Mohs College Annual Meeting

MAY 3-6, 2012 — CHICAGO, IL
FAIRMONT MILLENNIUM PARK

ACMS

American College of Mohs Surgery
555 East Wells Street, Suite 1100
Milwaukee, WI 53202
Phone: (414) 347-1103
(800) 500-7224 • Fax: (414) 276-2146
Email: info@mohscollege.org
Website: www.mohscollege.org/
www.SkinCancerMohsSurgery.org

Final Program

Table of Contents

ACMS Board of Directors 3
ACMS Board of Directors 3
ACMS Committees and Task Forces 3
Welcome Messages 4
Program-at-a-Glance 6
Fairmont Floor Maps 10
Fairmont Hotel & Transportation Info 14
Fellowship Training Director Listing 16
Keynote Speaker Biography 17
Guest Speaker Biographies 18
Chicago Map & Attractions 19
Faculty & Guest Speaker Listing 23
CME Information 24
Learning Objectives 25
Faculty Disclosure Information 26
Scientific Program Schedule
- Thursday, May 3 27
- Friday, May 4 31
- Saturday, May 5 33
- Sunday, May 6 34

Abstract Presentations; Thursday, May 3
- Scientific Research; 10:30 – 11:30 am 35
- Reconstruction Pearls; 11:30 am – 12:15 pm 40
- Tromovitch Award; 3:30 – 4:30 pm 45

Poster Presentation List 51
Poster Presentation Summaries 55
Exhibitor Floor Plan 80
Exhibitor Listing 81
ASMH Program-at-a-Glance 86
Speaker Index 88

ACMS 2011- 2012 Officers and Board of Directors

Officers
Brett M. Coldiron, MD, FACP
President

Marc D. Brown, MD
Vice President

Scott W. Fosko, MD
Secretary/Treasurer

Leonard M. Dzubow, MD
Immediate Past-President

Board of Directors
Sumaira Z. Aasi, MD
John G. Albertini, MD
Frederick S. Fish, III, MD
Glenn D. Goldman, MD
Christopher B. Harmon, MD
Gary P. Lask, MD
Ken K. Lee, MD
Tri H. Nguyen, MD
Suzanne M. Olbricht, MD

Scientific Program Committee
Deborah F. MacFarlane, MD, MPH, *Chair*
Howard W. Rogers, MD, PhD, *Vice Chair*
Brett M. Coldiron, MD, FACP
Marc D. Brown, MD
Scott W. Fosko, MD
Tatyana R. Humphreys, MD, *Ex-officio*
Fiona O'Reilly Zwald, MD

Staff
Kim Schardin, CAE, *Executive Director*
Erin O'Krongly, *Communications Manager*
Michelle Ridolfi, *Meetings Manager*
Susan Sadowski, *Education Manager*
Josh de Beer, *Membership & Meetings Coordinator*

ACMS Committees and Task Forces – 2011 - 2012

Bylaws Committee
Vicki J. Levine, MD, *Chair*

CME & Education Committee
Mary E. Maloney, MD, *Chair*

Communications & PR Committee
Alysa R. Herman, MD, *Chair*

Diagnostic Quality Control & Teaching Library Committee
Sumaira Z. Aasi, MD, *Chair*

Ethics Committee
Marta J. Van Beek, MD, *Chair*

Finance & Investment Committee
Scott W. Fosko, MD, *Chair*

Frederic E. Mohs Award Committee
Ronald G. Wheeland, MD, *Chair*

Grievance Committee
Randall K. Roenigk, MD, *Chair*

International Membership Research Task Force
Tri H. Nguyen, MD, *Chair*

Membership Committee
Marc D. Brown, MD, *Chair*

Newsletter Committee
Désirée Ratner, MD, *Chair*

Nominating Committee
Pearon G. Lang, Jr., MD, *Chair*

Public Policy Committee
Brent R. Moody, MD, *Chair*

Reconstructive Scale & Derm Surgery Journal Collaboration Task Force
Christopher B. Harmon, MD, *Chair*

Scientific Program Committee
Deborah F. MacFarlane, MD, MPH, *Chair*

Slide Review Task Force
Frederick S. Fish, III, MD, *Chair*

Tromovitch Award Committee
Michael Murphy, MD, *Chair*

Volunteerism/Pro-bono Task Force
Christopher B. Harmon, MD, *Chair*

Website Committee
Clarence W. Brown, Jr., MD, *Chair*

Site Inspection & Slide Review Board, LLC
(An ACMS subsidiary)

Fellowship Training Committee
Suzanne M. Olbricht, MD, *Chair*

Slide Review Committee
Glenn D. Goldstein, MD, *Chair*

Welcome

Dear ACMS Members and Colleagues,

On behalf of the ACMS Board of Directors, I welcome you to Chicago for the 44th Annual Meeting of the American College of Mohs Surgery.

I hope you have been looking forward to this week as much as I have; to join over 1,000 fellowship-trained skin cancer and reconstructive surgeons to learn, collaborate, and share with one another for the benefit of our patients. My sincere hope is that you are able to take much away from this meeting, which will resonate long after in your own practice.

I extend my sincere appreciation and gratitude to the Scientific Program Committee, headed by Chair, Dr. Deborah MacFarlane, who put together an outstanding program that will highlight many relevant topics to enhance your practice skills in cutaneous oncology, Mohs micrographic surgery, and reconstruction. Special thanks go to the members of the Scientific Program Committee: Drs. Marc Brown, Scott Fosko, Tatyana Humphreys, Howard Rogers, and Fiona O'Reilly Zwald for their dedication and contributions in planning this year's event.

In addition to an excellent program, the Exhibit Hall will provide information and extensive resources to benefit your practice. I strongly encourage you to take full advantage of the exhibitors' presence and visit them during their time here (Thursday 12 – 1:30 pm; 3 – 7:30 pm, Friday 12 – 6 pm & Saturday 11:30 am – 1:30 pm).

Aside from the opportunities available at our meeting for you to grow as a Mohs surgeon, take time to explore Chicago. Our host hotel, the Fairmont Millennium Park, provides us with a centralized location to all that the Windy City has to offer.

I hope you enjoy your time here in Chicago for what I believe will be another outstanding Annual Meeting of the American College of Mohs Surgery!

Sincerely,

Brett M. Coldiron, MD, FACP
ACMS President

Welcome

Dear Colleagues,

I'm pleased to present the educational program for the 2012 ACMS Annual Meeting in Chicago. The program has been very carefully constructed to provide practical and broad knowledge to enhance your practice of Mohs surgery and cutaneous oncology, with special focus on histopathology and reconstructive surgery. In response to members' feedback from last year's meeting, we will be introducing several new sessions.

This year, an outstanding selection of speakers will be addressing a spectrum of topics.

I am excited to welcome our keynote speaker for the 2012 Annual Meeting. Scott E. Parazynski, MD, highly decorated astronaut, mountaineer, and physician and currently the Chief Technology Officer & Chief Medical Officer at The Methodist Hospital Research Institute, TX will be giving his keynote address, *Extreme High Altitude Medicine* on Thursday evening. With a lifetime of highly interesting and unique experiences to share, you won't want to miss Dr. Parazynski's inspirational presentation.

On Friday morning, Michael J. Camilleri, MD, a Dermatopathologist from the Mayo Clinic will join Dr. Christian Baum in the session, *Dermpath Challenges: Difficult Cases from the Mayo Clinic*. Always a popular session, this should help enhance our diagnostic skills.

That afternoon, Dr. James R. Patrinely, MD, one of this country's foremost ophthalmic facial plastic surgeons, will present *Systematic Eyelid Reconstruction* and will then be a guest speaker in the session, *Complications: Prevention, Early Detection, & Management*.

On Saturday morning, Michael L. Bentz, MD, Professor and Chairman in the Division of Plastic and Reconstructive Surgery at University of Wisconsin School of Medicine and Public Health will present *Reconstruction of Mohs Defects: A Plastic Surgeon's Perspective*. Dr. Bentz has extensive experience in Mohs defect reconstruction and will also be a panelist in the session, *How Would You Reconstruct It?*

I want to extend my special thanks to the Scientific Program Committee members who so generously shared their time and insights with me to bring this quality program to you. A big thank you to Drs. Tatyana Humphreys, Howard Rogers, Brett Coldiron, Marc Brown, Scott Fosko, and Fiona Zwald. My thanks also to the CME Committee for their involvement: Chair, Dr. Mary Maloney and Drs. John Albertini, Jeremy Bordeaux, Christine Lopez, and Chrysalyne Schmults.

I would also like to acknowledge the tremendous work of the Mohs College administrative staff.

Finally, I would like to thank you for attending. It has been a very exciting year putting this program together and I sincerely hope you'll enjoy it.

Welcome to the Windy City!

Sincerely,

D F MacFarlane

Deborah F. MacFarlane, MD, MPH
Chair, ACMS 2012 Scientific Program Committee

Program-at-a-Glance

Wednesday, May 2

1:00 – 6:00 pm	Registration	Level B-1; *one floor below lobby level*
1:00 – 6:00 pm	Speaker Ready Room	Royal Room; *B-2 Level*
1:00 – 6:00 pm	Slide Library & Diagnostic Quality Control Self-examination	Embassy Room; *2nd Level*

Thursday, May 3

6:30 am – 5:00 pm	Registration	Outside of International Ballroom; *2nd Level*
6:30 am – 5:00 pm	Speaker Ready Room	Royal Room; *B-2 Level*
7:00 am – 9:00 pm	Slide Library & Diagnostic Quality Control Self-examination	Embassy Room; *2nd Level*
7:00 – 8:30 am	Concurrent Morning Mini-sessions:	
	103.1 Facial Reconstruction	Crystal Room; *3rd Level*
	103.2 Reconstructive Challenges: Lip & Ear	Moulin Rouge; *Lobby Level*
	103.3 Unusual Cutaneous Carcinomas: On the Road with Thelma and Louise	Chancellor Room; *3rd Level*
	103.4 Immunohistochemistry	Regal Room; *B-2 Level*
	103.5 Bleeding and Thrombosis: How to Prevent and to Manage	Regent Room; *3rd Level*
8:45 – 9:30 am	Opening Session & Welcome	Imperial Ballroom; *B-2 Level*
9:30 – 10:30 am	Literature Review	Imperial Ballroom; *B-2 Level*
10:30 – 11:30 am	Scientific Abstract Session	Imperial Ballroom; *B-2 Level*
11:30 am – 12:15 pm	Reconstruction Pearls Abstract Session	Imperial Ballroom; *B-2 Level*
12:15 – 1:15 pm	Networking Lunch in Exhibit Hall	International Ballroom; *2nd Level*
1:15 – 2:15 pm	Health Care Reform	Imperial Ballroom; *B-2 Level*
2:15 – 3:15 pm	Masters' Pearls ♦	Imperial Ballroom; *B-2 Level*
3:00 – 7:30 pm	Exhibit Hall Open	International Ballroom; *2nd Level*
3:15 – 3:30 pm	Break	
3:30 – 4:30 pm	Tromovitch Award Abstract Session	Imperial Ballroom; *B-2 Level*
4:30 – 5:30 pm	**Extreme High Altitude Medicine** **Keynote Speaker: Scott E. Parazynski, MD** A highly decorated astronaut, mountaineer and physician.	Imperial Ballroom; *B-2 Level*
5:30 – 7:30 pm	**Exhibit Hall Grand Opening & Welcome Reception** Don't miss this chance to relax and unwind with colleagues before an evening out in Chicago. Hors d'oeuvres and beverages will be provided for your enjoyment.	International Ballroom; *2nd Level*

♦ *Represents advanced expertise level course*

Program-at-a-Glance

Friday, May 4

6:30 am - 5:00 pm	Registration	Outside of International Ballroom; *2nd Level*
6:30 am – 5:00 pm	Speaker Ready Room	Royal Room; *B-2 Level*
7:00 am - 9:00 pm	Slide Library & Diagnostic Quality Control Self-examination	Embassy Room; *2nd Level*
7:00 – 8:30 am	Concurrent Morning Mini-sessions:	
	203.1 Strategies for Practice Efficiency	Regent Room; *3rd Level*
	203.2 Improving your Publication Track Record: Editors' Recommendations	Regal Room; *B-2 Level*
	203.3 Periocular Surgery: Practical Pearls & Complications	Moulin Rouge; *Lobby Level*
	203.4 Nose-ology: The Systematic Approach to Nasal Reconstruction	Crystal Room; *3rd Level*
	203.5 Managing Skin Cancer without a Knife	Chancellor Room; *3rd Level*
8:45 – 9:45 am	**Dermpath Challenges: Difficult Cases from the Mayo Clinic** **Guest Speaker: Michael J. Camilleri, MD**	Imperial Ballroom; *B-2 Level*
9:45 – 10:45 am	Mohs Frozen Section Challenges	Imperial Ballroom; *B-2 Level*
10:45 – 11:00 am	Break	
11:00 am – 12:00 pm	Melanoma Update	Imperial Ballroom; *B-2 Level*
12:00 – 6:30 pm	Exhibit Hall Open	International Ballroom; *2nd Level*
12:00 – 1:30 pm	**ACMS Annual Business Meeting & Lunch** *Non-members and guests: lunch on your own; visit the Exhibit Hall* Mohs College members are encouraged to attend the annual membership business meeting and lunch. This important meeting brings members up-to-date on issues of significance, such as CPT coding. The winners of the prestigious Frederic E. Mohs Award and Distinguished Service Award will be announced.	Imperial Ballroom; *B-2 Level*
1:30 – 2:30 pm	**Systematic Eyelid Reconstruction** ♦ **Guest Speaker: James R. Patrinely, MD**	Imperial Ballroom; *B-2 Level*
2:30 – 3:30 pm	**Complications: Prevention, Early Detection, & Management** **Guest Panelist: James R. Patrinely, MD**	Imperial Ballroom; *B-2 Level*
3:30 – 4:30 pm	Tumor Board ♦	Imperial Ballroom; *B-2 Level*
4:30 – 6:00 pm	Fellowship Training Directors' Session	Regent Room; *3rd Level*
4:30 – 6:30 pm	Visit the Exhibit Hall and Posters	International Ballroom; *2nd Level*
6:00 – 7:00 pm	Fellows-in-Training Reception *(For Program Directors and current FITs only)*	Moulin Rouge; *Lobby Level*

♦ *Represents advanced expertise level course*

Program-at-a-Glance

Saturday, May 5

6:30 am – 4:00 pm	Registration	Outside of International Ballroom; *2nd Level*
6:30 am – 4:00 pm	Speaker Ready Room	Royal Room; *B-2 Level*
7:00 am – 9:00 pm	Slide Library and Diagnostic Quality Control Self-examination	Embassy Room; *2nd Level*
7:00 – 8:30 am	Concurrent Morning Mini-sessions: *303.1: Coding: Up Close and Personal* *303.2 Sunscreen Update* *303.3 High Risk Tumors: Transplant Cases, Squamous Cell Carcinoma, & Immunosuppression* ♦ *303.4 Advanced Practice Management* *303.5 Dermpath Challenges: Interactive Session*	 Moulin Rouge; *Lobby Level* Regal Room; *B-2 Level* Gold Room; *2nd Level* Regent Room; *3rd Level* Crystal Room; *3rd Level*
8:45 – 9:45 am	Reconstruction of Mohs Defects: A Plastic Surgeon's Perspective ♦ **Guest Speaker: Michael L. Bentz, MD, FAAP, FACS**	Imperial Ballroom; *B-2 Level*
9:45 – 10:45 am	How Would You Reconstruct It? ♦ **Guest Panelist: Michael L. Bentz, MD, FAAP, FACS**	Imperial Ballroom; *B-2 Level*
10:45 – 11:45 am	The Undesirable Result ♦	Imperial Ballroom; *B-2 Level*
11:30 am – 1:30 pm	Exhibit Hall Open	International Ballroom; *2nd Level*
11:45 am – 1:00 pm	Lunch in the Exhibit Hall	International Ballroom; *2nd Level*
11:45 am – 1:00 pm	Women's Dermatology Society Networking Luncheon *(Pre-registration required)*	Regent Room; *3rd Level*
1:00 – 2:00 pm	Transplant Update	Imperial Ballroom; *B-2 Level*
2:00 – 3:00 pm	Coding Update	Imperial Ballroom; *B-2 Level*
3:00 – 4:00 pm	Anatomy of a Lawsuit	Imperial Ballroom; *B-2 Level*

Sunday, May 6

7:00 – 10:00 am	Speaker Ready Room	Royal Room; *B-2 Level*
7:30 – 8:30 am	Diagnostic Quality Control Exam Review	International Ballroom; *2nd Level**
8:30 – 10:00 am	Masters Session on Reconstruction ♦	International Ballroom; *2nd Level**
10:00 am	Meeting Adjourns	

*(*Please note: General Session room change)*

♦ *Represents advanced expertise level course*

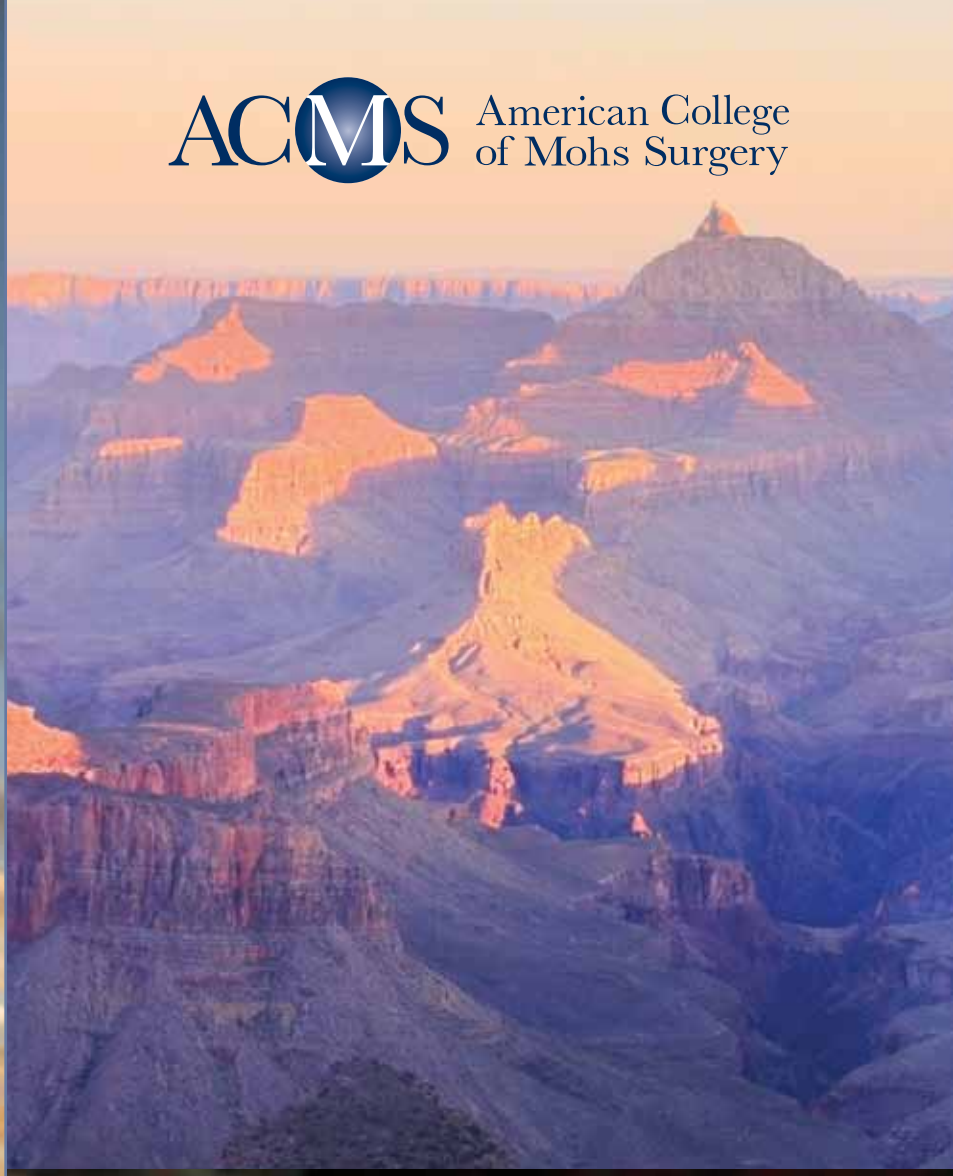
Back by Popular Demand

Professional Headshots

Available FREE to all AM12 Attendees

On Thursday, May 3, by the ACMS Registration Desk (outside of the International Ballroom; 2nd Level) from 11:00 am – 1:30 pm, professional headshots will be taken by our photographer.
Photo proofs will be sent electronically following the meeting for personal use.
All photos will be taken on a first come, first served basis until the 1:30 pm cutoff.

ACMS American College of Mohs Surgery



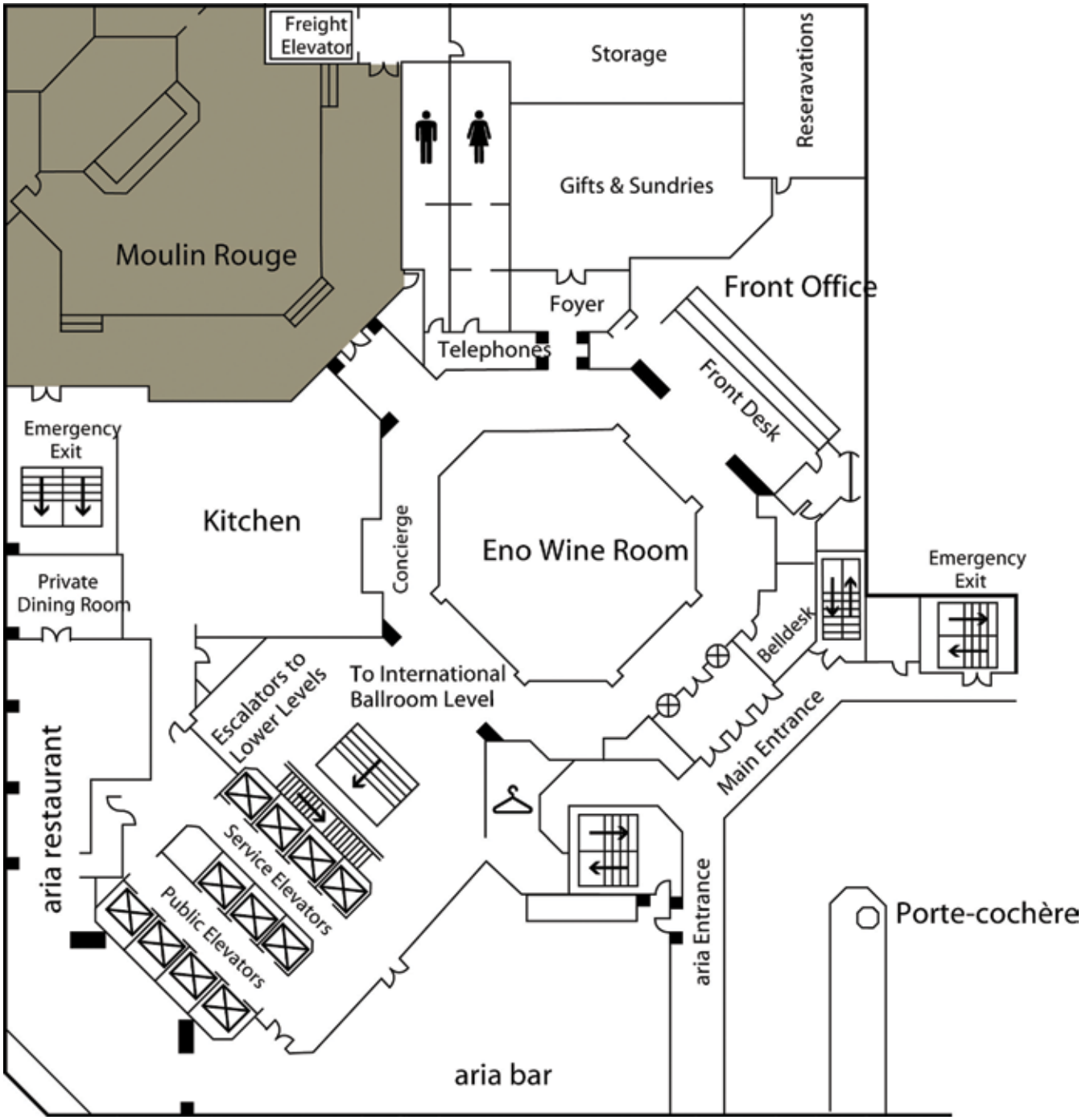
Phoenix
ARIZONA

46th Mohs College Annual Meeting

MAY 1–4, 2014 · MARRIOTT DESERT RIDGE

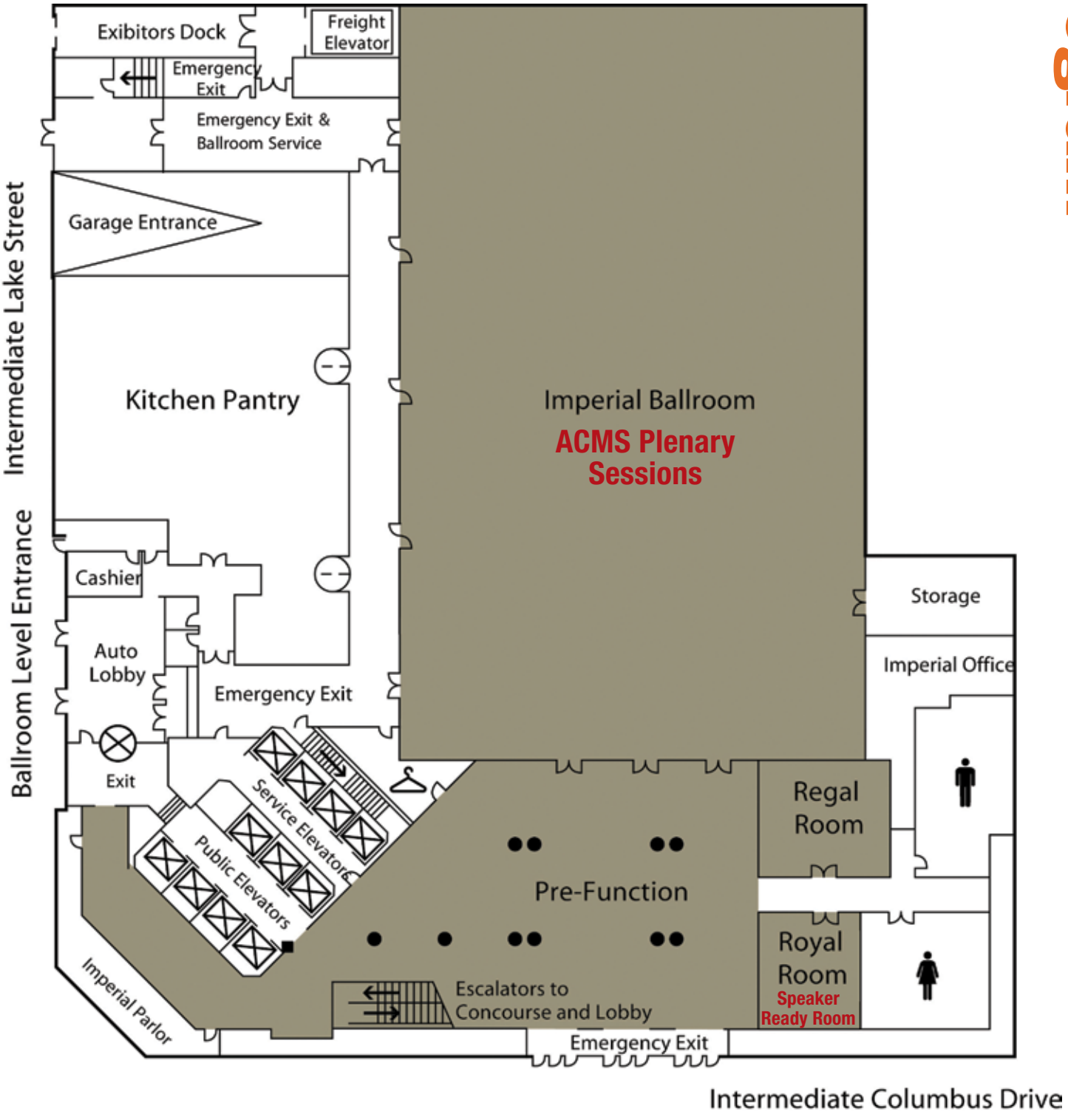
Fairmont Floor Maps

Lobby



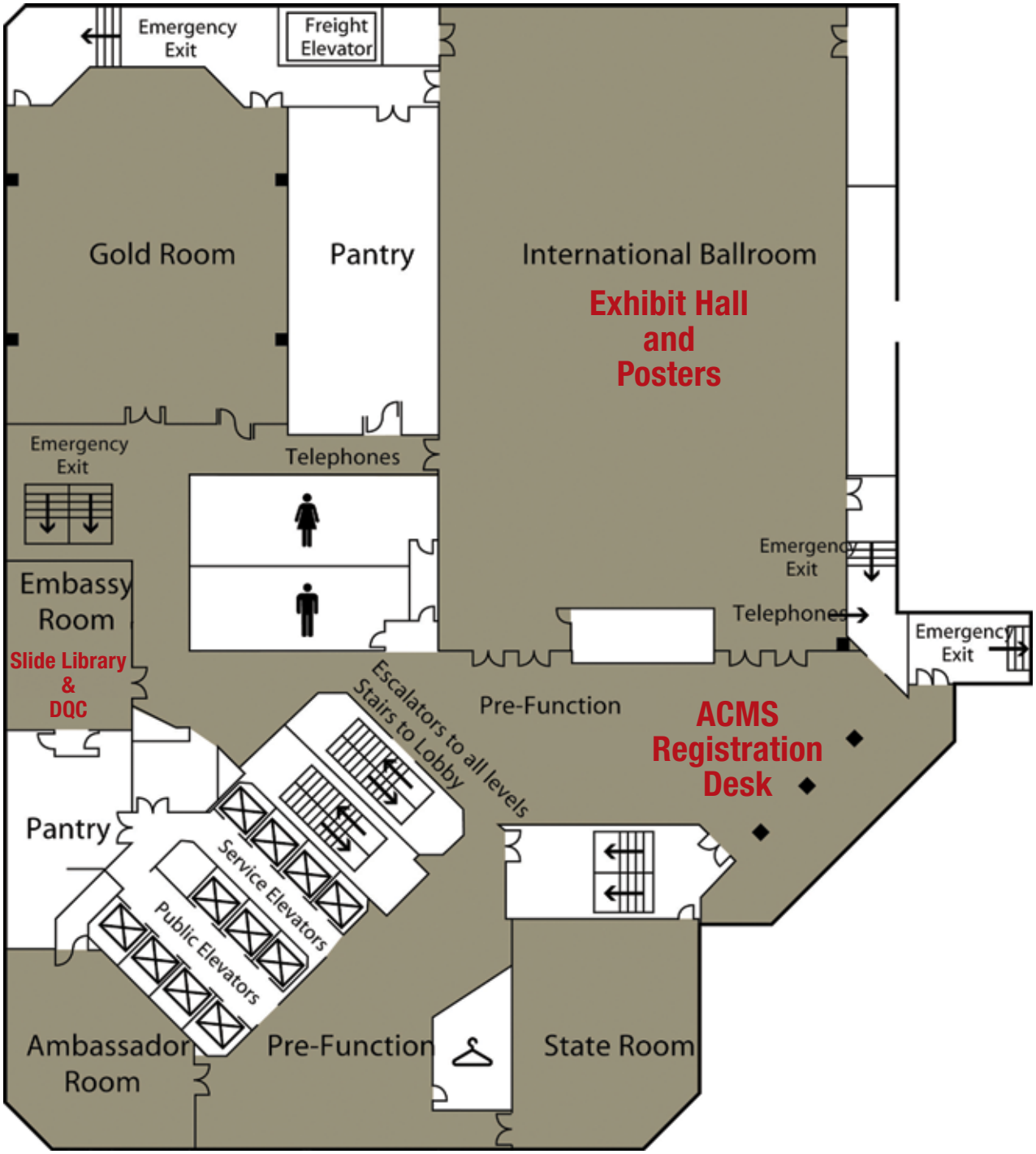
Fairmont Floor Maps

B-2 Level



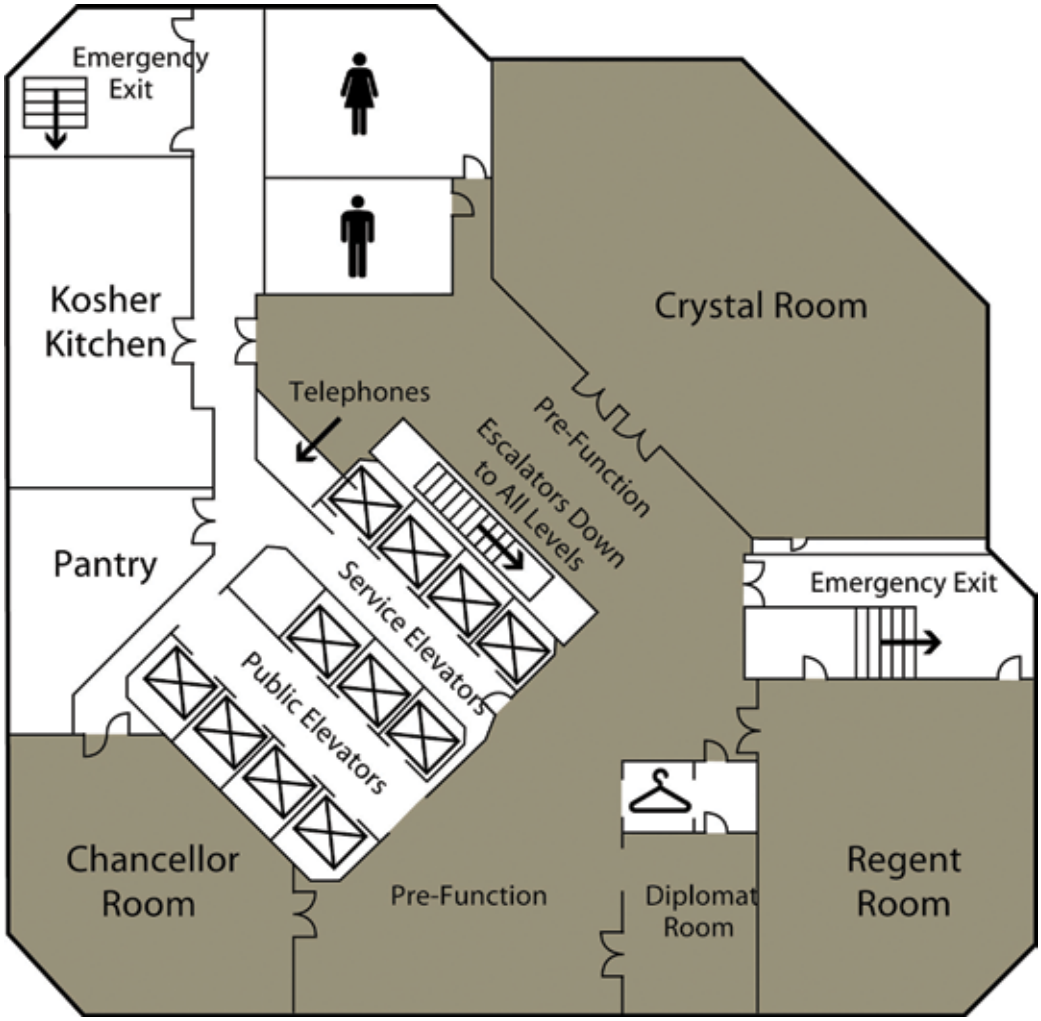
Fairmont Floor Maps

2nd Level



Fairmont Floor Maps

3rd Level



Fairmont Hotel & Transportation Information

Fairmont Millennium Park

200 North Columbus Drive
Chicago, Illinois 60601
(312) 565-8000 Toll Free: (800) 526-2008
http://www.fairmont.com/chicago

Hotel check-in time is 3:00 pm CT and check-out time is 12:00 pm CT (Noon)

Fairmont Millennium Park Concierge Service

Concierge Desk at (312) 565-6651

Fairmont President's Club

Sign up for the Fairmont President's Club at: www.fairmont.com/fpc. This complimentary club provides you with free in-room internet service and admittance to the mySpa Fitness Studio.

In-room High Speed Internet Access

In-room High Speed Wi-Fi Internet access suited for internet browsing, web based email and social networking: $13.95 plus tax per 24-hour period or complimentary for members of Fairmont President's Club.

mySpa

Hours of Operation
- Monday – Friday: 9:00 am – 9:00 pm
- Saturday – Sunday: 9:00 am – 8:00 pm
- mySpa is located on the B-1/Spa Level.

mySpa Fitness Studio

Hours of Operation
- Monday – Friday: 5:30 am – 9:00 pm
- Saturday – Sunday: 7:30 am – 8:00 pm
- mySpa Fitness Studio is located on the B-1/Spa Level.

Fairmont Millennium Park Business Center

The Business Center is located on the B-1/Spa Level.
Hours of Operation
- Monday – Friday: 6:30 am – 9:00 pm
- Saturday: 8:00 am – 8:00 pm
- Sunday: 9:00 am – 5:00 pm

Shipping Instructions (receiving fee imposed based on weight):
- Fairmont Chicago, Millennium Park
- C/O Guest's Name
- 200 North Columbus Drive
- Chicago, IL 60601

Fairmont Hotel & Transportation Information

Fairmont Dining Options

aria restaurant & bar

A new world Asian experience, aria adds a unique spin to far eastern delicacies prepared with locally-sourced ingredients. aria restaurant is open daily for breakfast, lunch and dinner.

East meets west at Chicago's only sushi club. aria bar is open for lunch, sushi and cocktails daily. For reservations call (312) 444-9494.

aria restaurant is home to fourth place Top Chef: Texas contestant, Chef de Cuisine, Beverly Kim.

Eno Wine Room

Eno, a wine, chocolate, cheese sensation, features wines from over 300 wineries, with 60 wines available by the glass and 20 different flights.

Or, retreat to the comfort of your guestroom and experience In-Room Dining, offered between 6:00 am and 10:30 pm daily.

General Transportation

The following airports are near Fairmont Millennium Park:

Chicago O'Hare International Airport (ORD) (18 miles NW)
10000 Bessie Coleman Drive
Chicago, IL 60666
www.ohare.com

Chicago Midway International Airport (MDW) (12 miles SW)
5700 S. Cicero Avenue
Chicago, IL 60638
http://www.ohare.com/About/Midway/Default.aspx

Public Transportation

Chicago's public transit system is an effective way to move around the city. A one-way ticket is $2.75 per ride. Daily and weekend passes are available. For more information, call CTA (Chicago Transit Authority) at (312) 836-7000 or visit www. transitchicago.com

Car Rental

The Concierge at Fairmont Millennium Park can help with car rental arrangements.

Alamo: (800) 327-8633
AVIS: (800) 331-1212
Budget: (800) 527-0700
Enterprise: (312) 565-6518
Hertz: (800) 654-3131
National: (800) 227-7368

Bus

The Greyhound Bus Terminal is located just a few minutes from the hotel. For more information, call Greyhound at (800) 229-9424.

Train

The Amtrak Train Station is 2 miles from the hotel. For more information, call Amtrak at (800) 872-7245 or visit www.amtrak. com.

Limousine

Arrangements for Aaron Limousine can be made through the Concierge at Fairmont Millennium Park or by calling (312) 988- 7070.

Taxi

Available in front of the hotel

Parking

The hotel's valet parking charges (including tax) are as follows:

Up to two hours: $24.00
Two to Six hours: $36.00
Six to 24-hours and overnight parking: $51.00

ACMS Fellowship Training Director Listing

Murad Alam, MD
John G. Albertini, MD
Joseph Alcalay, MD
John P. Arlette, MD, FRCPC
Philip L. Bailin, MD
David S. Becker, MD
Anthony V. Benedetto, DO
Richard G. Bennett, MD
Daniel Berg, MD
David G. Brodland, MD
Robert A. Buzzell, MD
John A. Carucci, MD
Roger I. Ceilley, MD
Armand B. Cognetta, Jr., MD
Brett M. Coldiron, MD, FACP
Brian Cook, MD
Joel Cook, MD
Scott M. Dinehart, MD
Heidi B. Donnelly, MD
Raymond G. Dufresne, Jr., MD
Daniel B. Eisen, MD
Michael J. Fazio, MD
Franklin P. Flowers, MD
Scott W. Fosko, MD
Algin B. Garrett, MD
Roy G. Geronemus, MD
Hugh M. Gloster, Jr., MD
David J. Goldberg, MD, JD
Leonard H. Goldberg, MD
Glenn D. Goldman, MD
Glenn D. Goldstein, MD
Donald J. Grande, MD
Steven S. Greenbaum, MD
Hubert T. Greenway, Jr., MD
C. William Hanke, MD
Christopher B. Harmon, MD
George J. Hruza, MD
Conway Huang, MD
Satori Iwamoto, MD, PhD
Nathaniel J. Jellinek, MD
S. Brian Jiang, MD
Timothy M. Johnson, MD
David E. Kent, MD
Gary Lask, MD
Naomi Lawrence, MD
Peter K. Lee, MD, PhD
David J. Leffell, MD
Deborah F. MacFarlane, MD, MPH
Mary E. Maloney, MD
Victor J. Marks, MD
Ellen S. Marmur, MD
Michael W. McCall, MD
J. Ramsey Mellette, Jr., MD
Christopher J. Miller, MD
Gary D. Monheit, MD
Christian Murray, MD, BSC, FRCPC
Kishwer S. Nehal, MD
Peter B. Odland, MD
Suzanne M. Olbricht, MD
Michael L. Ramsey, MD
Désirée Ratner, MD
Randall K. Roenigk, MD
Arlene S. Rogachefsky, MD
Thomas E. Rohrer, MD
Eli R. Saleeby, MD
Paul J. M. Salmon, MD
Chrysalyne D. Schmults, MD
Daniel M. Siegel, MD
Stephen N. Snow, MD
Thomas Stasko, MD
Neil A. Swanson, MD
R. Stan Taylor, III, MD
Abel Torres, MD, JD
Timothy Wang, MD
Carl V. Washington, Jr., MD
Siegrid Yu, MD
Christopher Zachary, MD
Nathalie C. Zeitouni, MD
John A. Zitelli, MD
David M. Zloty, MD

Keynote Speaker Biography

Scott E. Parazynski, MD

Dr. Scott E. Parazynski has lived and traveled all over the world, spending many of his grade school and high school years in places such as Dakar, Senegal; Beirut, Lebanon; Tehran, Iran; and Athens, Greece. A graduate of Stanford University and Stanford Medical School, he went on to train at Harvard and in Denver in preparation for a career in emergency medicine and trauma. Dr. Parazynski is also a physiologist with expertise in human adaptation to stressful environments.

In 1992, he was selected to join NASA's Astronaut Corps and eventually flew five Space Shuttle Missions and conducted seven spacewalks (EVAs). In his 17 years as an astronaut, he served in numerous senior leadership roles, including EVA Branch Chief and the Lead Astronaut for Space Shuttle Thermal Protection System Inspection & Repair. Dr. Parazynski has spent over eight weeks in space with more than 47 hours outside on spacewalks.

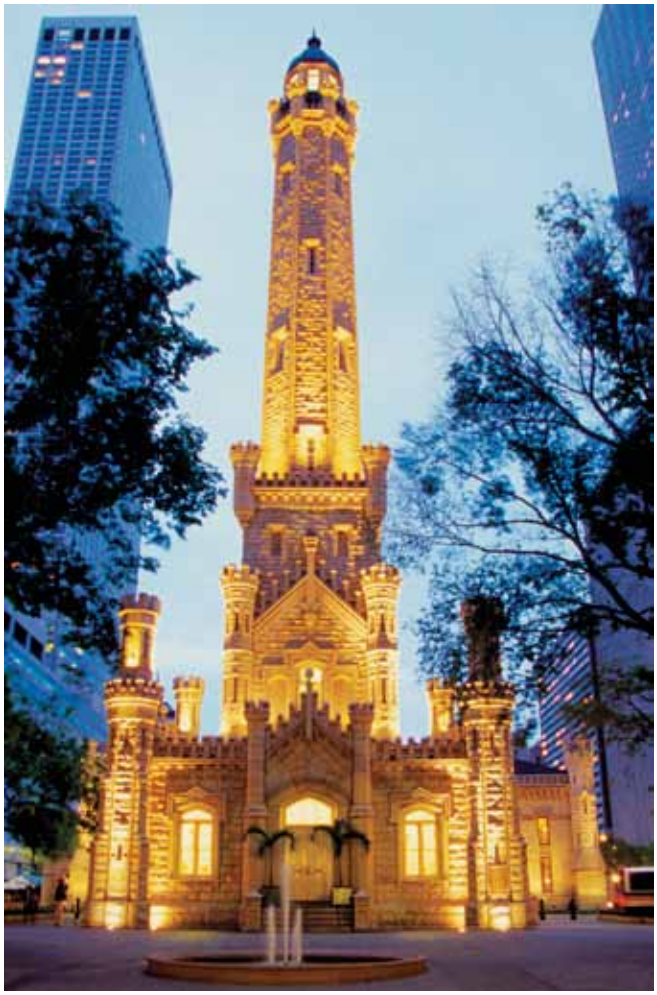
In addition to being a life-long SCUBA diver and accomplished mountaineer, Dr. Parazynski is also a commercial, instrument, multiengine and seaplane-rated pilot with over 2,500 flight hours. He began climbing in his teens, and has climbed in the Alaska Range, the Cascades, the Rockies, the Alps, the Andes and the Himalayas. On May 20, 2009, he scaled Mt. Everest and became the first astronaut to stand on top of the world. Additionally, as part of a NASA-sponsored expedition to the high Andes, he conducted a scientific dive in the summit caldera lake of 19,700-foot Licancabur volcano, the world's highest lake.

He is the recipient of a number of prestigious awards, including: five NASA Spaceflight Medals, two NASA Distinguished Service Medals, two NASA Exceptional Service Medals, two Vladimir Komarov Diplomas from the Fédération Aéronautique Internationale, two Flight Achievement Awards from the American Astronomical Association, the Aviation Week Laureate Award, the Ellis Island Family Heritage Award, Gold Medal from the American Institute of Polish Culture, and the Lowell Thomas Award from the Explorers Club. Additionally, he is a member of the Arkansas Aviation Hall of Fame.

He is currently a visiting professor of space medicine at the University of Oxford, a consulting professor in the department of medicine at Stanford Medical School, and a clinical assistant professor of aerospace medicine at UTMB-Galveston. He is also chairman of the board of the Challenger Center for Space Science Education, a science, technology, engineering and math (STEM) education non-profit organization, motivating 400,000 school kids each year with simulated space missions.

Presently, Dr. Parazynski is at The Methodist Hospital Research Institute as the Chief Technology Officer and Chief Medical Officer, where he is helping a world class team of scientists and clinicians to develop technologies that will one day reshape medical care around the world.

Dr. Parazynski shares his experiences on Thursday, May 3rd in his keynote address, *Extreme High Altitude Medicine* from 4:30 – 5:30 pm in the Imperial Ballroom (B-2 Level).



Guest Speaker Biographies

Michael L. Bentz, MD, FAAP, FACS

Michael L. Bentz, MD, FAAP, FACS, is Professor and Chairman in the Division of Plastic and Reconstructive Surgery at University of Wisconsin School of Medicine and Public Health and Chairman-elect of the American Board of Plastic Surgery. He is certified by the American Board of Surgery and the American Board of Plastic Surgery.

Dr. Bentz has had extensive experience in Mohs surgical reconstruction. For many years with Dr. Frederick J. Menick as his partner, he has given a course specifically on Mohs reconstruction to American Society of Plastic Surgery members, and has presented this course in Asia, South America, Central America and Europe. Dr. Bentz also has extensive experience in head and neck surgery, hand surgery, abdominal wall, and extremity reconstruction as well as pediatric surgery. Additionally, he has edited two books on Plastic Surgery and given over 260 lectures on the specialty.

Dr. Bentz shares his experiences on Saturday, May 5th as a guest speaker in the session *Reconstruction of Mohs Defects: A Plastic Surgeon's Perspective* from 8:45 – 9:45 am and as a panelist in *How Would You Reconstruct It?* from 9:45 – 10:45 am in the Imperial Ballroom (B-2 Level).

Michael J. Camilleri, MD

Michael J. Camilleri, MD, is a Dermatopathologist and Assistant Professor at Mayo Clinic, Rochester, MN where he holds joint appointments in the Department of Dermatology and the Division of Anatomic Pathology. Dr. Camilleri received training in Dermatology in Malta and also completed a Dermatology residency and two fellowships, Dermatopathology and Cutaneous Immunopathology, at Mayo Clinic. Dr. Camilleri is Head of the Section of Cutaneous Immunopathology and Director of the Immunodermatology Laboratory.

Dr. Camilleri is certified by the American Board of Dermatology, the American Board of Pathology, and the Royal College of Physicians and Surgeons. Dr. Camilleri's practice includes clinical dermatology, dermatopathology, immunodermatology, and research. He has lectured on numerous topics within the field of Dermatology and Dermatopathology in Europe and in the United States. In recognition of his dedication to education and teaching skills, he has received the Teacher of the Year Award four times from the Department of Dermatology at the Mayo Clinic, earning induction into the Mayo Clinic Teacher Hall of Fame.

Dr. Camilleri will join Dr. Christian Baum to share his experience in challenges in the interpretation of cutaneous pathology in the session, *Dermpath Challenges: Difficult Cases from the Mayo Clinic* on Friday, May 4th from 8:45 – 9:45 am in the Imperial Ballroom (B-2 Level).

James R. Patrinely, MD

James R. Patrinely, MD, is one of this country's foremost ophthalmic facial plastic surgeons. A recipient of the Dean's award and graduate of the Vanderbilt University School of Medicine, he has had extensive residency and fellowship training at Johns Hopkins, the University of Utah, and Baylor College of Medicine.

He is board certified in ophthalmology; is credentialed by the American Society of Ophthalmic Plastic and Reconstructive Surgery; is a Fellow of the American College of Surgeons and a Fellow in the American Academy of Facial Plastic Surgery. He is selected for membership by the International Orbit Society which recognizes the top 25 orbital specialists on the world.

From 1986 to 1997, Dr. Patrinely was an associate professor of both ophthalmology and plastic surgery at Baylor College of Medicine in Houston and now he is Clinical Professor of Ophthalmology and Plastic Surgery. He continues to be involved in the development of new techniques and in the training of doctors in these specialties. He has pioneered many new reconstructive techniques for complex eyelid and orbital deformities.

A prolific writer, lecturer, and leader in the field of ophthalmic plastic surgery, he has authored over 200 works in his field and given over 250 lectures in the U.S. and abroad. Dr. Patrinely has been selected by his peers for The Best Doctors in America and by U.S. News and World Report as the top 1% in his field. He was named Best for Eyes in Houston in the book Best Plastic Surgeons in US by Major City.

Dr. Patrinely shares his insights on Friday, May 4th in the session *Systematic Eyelid Reconstruction* on from 1:30 – 2:30 pm and as a guest speaker in the session *Complications: Prevention, Early Detection, & Management* from 2:30 – 3:30 pm in the Imperial Ballroom (B-2 Level).

Chicago Map & Attractions

Chicago's great magic lies in its mix: sophisticated yet friendly, bustling city streets adjacent to long stretches of green parks and sparkling blue Lake Michigan, and a year-round array of things to see and do. Chicago is more walkable than most global cities, with endless restaurants, shopping and nightlife to match every taste, budget and mood. For more information: www.ChooseChicago.com

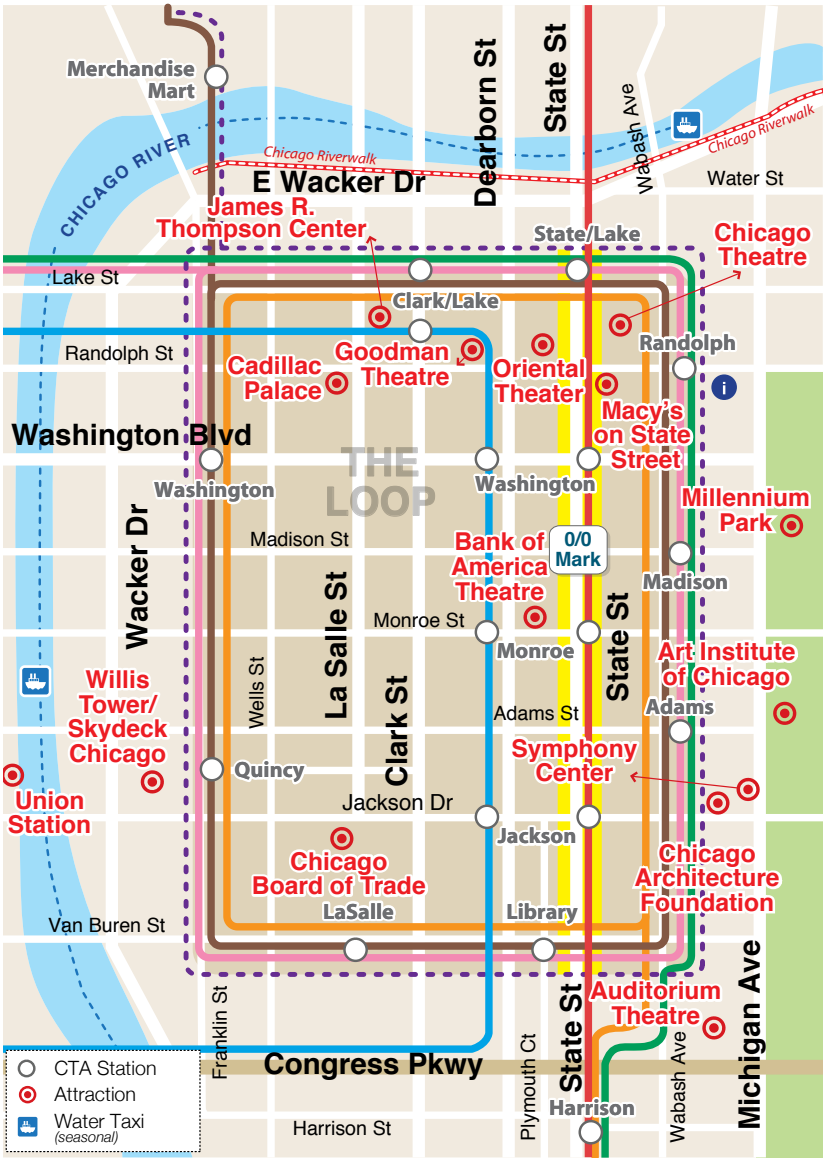
Adler Planetarium & Astronomy Museum

1300 S. Lake Shore Drive, (312) 922-7827
http://www.adlerplanetarium.org/
Visit the Adler's three theaters and numerous exhibitions for an unforgettable space science experience. Daily activities and special events will add to your exploration.

Chicago Detours

(312) 350-1131
www.chicagodetours.com
Smart, creative, and engaging guided tours for curious people. Experience history and culture through educated commentary and multimedia on iPads while exploring stories and places locals don't even know about. Topics span architecture, art, history, food, and entertainment.

On "Inside the Loop" you'll walk inside buildings, such as a skyscraper church, and explore underground passages. "Good Times around Michigan Ave" wanders the Mag Mile's sites of parties and entertainment. "Our Chicago Sound: Jazz, Blues, and More," a bus tour through various neighborhoods, examines the people and culture of our musical past. Chicago Detours accommodate groups of various sizes, and creatively design custom tours.



THE LOOP

Chicago Dine-Around - Progressive Dining Tour

(312) 437-3463
www.chicagodinearound.com
Embark on an adventure to Chicago's best restaurants. Guests are chauffeured around Chicago in a stylish coach bus to enjoy Hors D'oeuvres served at the first restaurant, the Main Course at a second restaurant, and Dessert at a third restaurant. The tour offers a unique, fun and exciting way to experience different restaurants in Chicago, interact with others, and tour Chicago. Chicago Dine-Around offers the most unique Chicago dining experience. En route to each restaurant, the tour guide will familiarize you with the different neighborhoods visited, point out various points of interest, and offer an overall unique perspective of Chicago.

Chicago's Finest River Walk Tour

(312) 202-0745
www.chicagosfinestriverwalktour.com
Enjoy a great day in Chicago strolling along the scenic Chicago River while enjoying the city's most fun and dynamic historical walking tour! Burn off some calories while learning and discussing the city's rich history, which is brimming with amazing stories of mankind's' triumph over nature and is filled with an assortment of colorful characters. This historical walking tour brings all these vibrant stories and figures to life to help illustrate Chicago's jubilant, but, at times, checkered past. In addition, view some of the city's architectural wonders along the river while competing in the challenging "Do you know" trivia contest!

Chicago Attractions

The Chicago Theatre Marquee Tour

175 N. State Street, (800) 745-3000
www.thechicagotheatre.com/tour
In addition to the many events held at the Theatre, the venue offers the "Chicago Theatre Marquee Tour" weekly, which takes you on a history-filled journey, from the inception of this majestic venue in 1921, all the way to its present day incarnation as a premiere entertainment venue. When possible, you'll even get to go backstage, where famous artists, from Frank Sinatra and Dean Martin to Dolly Parton and Alicia Keys, have left their signatures on the dressing room walls! During the tour you will have the opportunity to capture beautiful photos to share on the Theatre's Facebook page. All tour attendees also get to enjoy a historic photo display at the end of the tour and receive a complimentary VIP pass.

Field Museum

1400 S. Lake Shore Drive, (312) 922-9410
http://fieldmuseum.org/
Science rules at the three great institutions that make up Chicago's lakefront Museum Campus. Centered within The Field Museum's 20 million biological and anthropological specimens is Sue, the largest and most complete T-Rex ever found.

Frank Lloyd Wright Home and Studio in Oak Park + Wright's Robie House in Chicago

www.gowright.org
Experience two celebrated buildings designed by Frank Lloyd Wright, America's most famous architect. Travel ten miles west of Chicago to beautiful Oak Park to experience Wright's first Home and Studio which served as his private residence, studio and architectural laboratory during the first twenty years of his career. Witness a modern architecture icon with a visit to Wright's Robie House in the Hyde Park neighborhood of Chicago, designated by the American Institute of Architects as one of the 10 most significant structures of the 20th century. Explore the amazing contemporary spaces that sparked a revolution in residential architecture.

International Museum of Surgical Science

1524 N. Lake Shore Drive, (312) 642-6502
https://www.imss.org/
Housed in a historic mansion on the Gold Coast, the collections and exhibits portray the mysteries and milestones that have shaped modern surgical science.

John Hancock Observatory

875 N. Michigan Avenue, 94th Floor, (312) 751-3681
www.hancockobservatory.com
The John Hancock Observatory stands 1,000ft above The Magnificent Mile. With views spanning four states, there is no better place to see the city. Discover the city with a complimentary multimedia tour, step outside on Chicago's only open-air Skywalk, check out the world's first interactive telescopes, and enjoy a treat in the world's highest Lavazza Espression Café. You simply cannot miss what Chicago Tribune calls "the best view of Chicago!"

Chicago Attractions

Lincoln Park Zoo

Cannon Drive at Fullerton Parkway, (312) 742-0547
www.lpzoo.org
Lincoln Park is one of the last remaining free admission zoos! Go nose-to-nose with gorillas and chimpanzees; see the sights and sounds of Africa while witnessing some of the world's rarest creatures including wild dogs, pygmy hippos and black rhinos.

Macy's on State

111 N. State Street, (312) 781-4483
www.visitmacyschicago.com
Macy's on State Street is a quintessential Chicago experience. As one of the world's largest department stores, the State Street location has been a Chicago destination for more than a century. Today, this flagship Macy's store covers an entire city block and features 10 floors of retail space, a variety of unique restaurants, annual signature special events, and outstanding visitor services. Macy's on State Street, listed on the National Register of Historic Places, offers a variety of architectural and behind the scenes tours as well as programs from fashion trends to cooking demonstrations.

Millennium Park

201 E. Randolph Street, Chicago, (312) 744-6050
An award winning center for art, music, architecture and landscape design. The 24.5-acre Park features the work of world-renowned architects, planners, artists and designers.

Shedd Aquarium

1200 S. Lake Shore Drive, (312) 939-2438
http://www.sheddaquarium.org/
From whales to snails, tarantulas to turtles, meet more than 32,000 creatures from aquatic habitats around the world. Explore the Shedd's newly renovated Oceanarium, where you can get face to face with beluga whales, dolphins, sea otters, sea lions and penguins. Two million annual visitors can't be wrong: Shedd Aquarium is the must-see destination in Chicago!

Sky Deck Chicago

233 S. Wacker Drive, (312) 875-9696
www.theskydeck.com
Located in the Willis Tower (formerly Sears Tower) this is a "one stop Chicago" experience featuring museum quality interactive exhibits, the fastest multimedia elevator ride and new theater presentations highlighting the architecture and culture of Chicago.

Tastebud Tours

550 N. Kingsbury 218, (219) 929-6648
www.tastebudtours.com
Join Tastebud Tours the #1 Food Tour in Chicago in the city of deep dish pizza and Chicago-style hot dogs. Enjoy tastes of these iconic dishes synonymous with our great city and be introduced to other foods that Chicago has made famous. Walk through the heart of the city on our taste adventure. Eat at six or seven memorable restaurants and food specialty shops. Hear about Chicago's food history, cultural fun facts and celebrated cuisine. Gift certificates are available along with group events & customized private tours. Open year-round. Advance ticket purchase is required. Tours sell out in advance.

The 900 Shops

900 North Michigan Avenue, (312) 915-3916
http://www.shop900.com/
The 900 shops located on the Magnificent Mile, is a must-see shopping destination, with over 70 exclusive luxury shops including Bloomingdale's, Coach, Gucci, Michael Kors, and St. Croix, as well as other unique boutiques, spas and dining selections.

Wrigley Field Tours

1060 West Addison, (773) 404-CUBS
www.cubs.com
Stroll through the home of the Chicago Cubs and get an insider's look at more than 97 years of history in this legendary ballpark. Guided tours may include visits to the press box, clubhouses, and dugouts, as well as a chance to step on the field. (On days that coincide with baseball games or special events, certain areas may have limited or no access.)

Save the Date

45th Mohs College ANNUAL MEETING

Thursday, May 2—Sunday, May 5, 2013
WASHINGTON, D.C. · OMNI SHOREHAM

Thursday, May 2 ~
Sunday, May 5, 2013

•

Omni Shoreham
Washington, D.C.

Faculty & Guest Speaker Listing

Sumaira Z. Aasi, *Redwood City, CA*
Murad Alam, *Chicago, IL*
John G. Albertini, *Greensboro, NC*
Michael J. Albom, *New York, NY*
Joseph Alcalay, *Tel-Aviv, Israel*
Sarah Arron, *San Francisco, CA*
Rupert B. Barry, *Newcastle Upon Tyne, United Kingdom*
Christian L. Baum, *Rochester, MN*
Richard G. Bennett, *Santa Monica, CA*
Michael L. Bentz, *Madison, WI*
Christopher K. Bichakjian, *Ann Arbor, MI*
Elizabeth M. Billingsley, *Hershey, PA*
Jeremy S. Bordeaux, *Cleveland, OH*
Paul H. Bowman, *Tampa, FL*
Jerry D. Brewer, *Rochester, MN*
David G. Brodland, *Pittsburgh, PA*
Clarence W. Brown, Jr., *Skokie, IL*
Marc D. Brown, *Rochester, NY*
Michael J. Camilleri, *Rochester, MN*
Michael Campoli, *Pittsburgh, PA*
Todd V. Cartee, *Hershey, PA*
An-Wen Chan, *Toronto, ON, Canada*
Basil S. Cherpelis, *Tampa, FL*
Brett M. Coldiron, *Cincinnati, OH*
Kristina M. Collins, *Burlington, MA*
Scott A. B. Collins, *Tigard, OR*
Joel Cook, *Charleston, SC*
Jonathan L. Cook, *Durham, NC*
W. Patrick Davey, *Paradise Valley, AZ*
Scott M. Dinehart, *Little Rock, AK*
Leonard M. Dzubow, *Media, PA*
Daniel B. Eisen, *Sacramento, CA*
Mary F. Farley, *Annapolis, MD*
Michael J. Fazio, *Sacramento, CA*
Galen H. Fisher, *Richmond, VA*
Joseph K. Francis, *Santa Monica, CA*
Montgomery O. Gillard, *Ypsilanti, MI*
Hugh M. Gloster, Jr., *Cincinnati, OH*
David J. Goldberg, *Hackensack, NJ*
Leonard H. Goldberg, *Houston, TX*
Glenn D. Goldman, *Burlington, VT*
Glenn D. Goldstein, *Leawood, KS*
S. Tyler Hollmig, *Palo Alto, CA*
Tatyana R. Humphreys, *Philadelphia, PA*
S. Walayat Hussain, *Leeds, United Kingdom*
Sherrif F. Ibrahim, *Rochester, NY*
Omar A. Ibrahimi, *Farmington, CT*
Luciano J. Iorizzo, III, *Nashville, TN*
Brooke A. Jackson, *Chicago, IL*
Karen J. Johnson, *Denver, CO*
Aaron K. Joseph, *Pasadena, TX*
Kent J. Krach, *Clinton Township, MI*
Ken K. Lee, *Portland, OR*
Deborah F. MacFarlane, *Houston, TX*
Matthew J. Mahlberg, *Englewood, CO*
Mary E. Maloney, *Worcester, MA*
Jamie L. McGinness, *Houston, TX*
J. Ramsey Mellette, Jr., *Aurora, CO*
Gary W. Mendese, *Stoneham, MA*
Craig C. Miller, *Buffalo, NY*
Stanley J. Miller, *Towson, MD*
Rachel L. Moore, *Whittier, CA*
Neil J. Mortimer, *Bayfair, New Zealand*
Ann G. Neff, *Bradenton, FL*
Marcy Neuburg, *Milwaukee, WI*
Tri H. Nguyen, *Pearland, TX*
Kevin W. O'Bryan, *New York, NY*
Suzanne M. Olbricht, *Burlington, MA*
Kenny J. Omlin, *Vacaville, CA*
Clark C. Otley, *Rochester, MN*
Scott E. Parazynski, *Houston, TX*
James R. Patrinely, *Houston, TX*
Désirée Ratner, *New York, NY*
June K. Robinson, *Chicago, IL*
Randall K. Roenigk, *Rochester, MN*
Thomas E. Rohrer, *Chestnut Hill, MA*
Paul J. M. Salmon, *Bayfair, New Zealand*
Carl F. Schanbacher, *Boston, MA*
Chrysalyne D. Schmults, *Jamaica Plain, MA*
Roberta D. Sengelmann, *Santa Barbara, CA*
Daniel M. Siegel, *Smithtown, NY*
John W. Skouge, *Lutherville, MD*
Joseph F. Sobanko, *Philadelphia, PA*
Thomas Stasko, *Nashville, TN*
John M. Strasswimmer, *Delray Beach, FL*
Neil A. Swanson, *Portland, OR*
Zeina S. Tannous, *Boston, MA*
Valencia D. Thomas, *Houston, TX*
Abel Torres, *Loma Linda, CA*
Nicole F. Velez, *Brookline, MA*
Allison T. Vidimos, *Cleveland, OH*
Carl Vinciullo, *Mount Hawthorn, Australia*
Carl V. Washington, Jr., *Atlanta, GA*
J. Michael Wentzell, *Billings, MT*
Christopher W. Weyer, *Cleveland, OH*
Andrea Willey, *Vacaville, CA*
Ashley Wysong, *Redwood City, CA*
Mark J. Zalla, *Florence, KY*
Nathalie C. Zeitouni, *Buffalo, NY*
Isaac Zilinsky, *Tel HaShomer, Israel*
Fiona O'Reilly Zwald, *Atlanta, GA*

CME Information

Accreditation Statement

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of the Institute for the Advancement of Human Behavior (IAHB) and American College of Mohs Surgery. The IAHB is accredited by the ACCME to provide continuing medical education for physicians.

Credit Designation Statement

The IAHB designates this live activity for a maximum of 25.5 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The American College of Mohs Surgery Annual Meeting (Program #197100) is recognized by the American Academy of Dermatology for 25.5 AAD Recognized Credit(s) and may be used toward the American Academy of Dermatology's Continuing Medical Education Award.

AAD members should self-report their AAD recognized CME Credits via the AAD Online Transcript Program.

Physician Assistant Credit

The American Academy of Physician Assistants accepts AMA PRA Category 1 Credit(s) TM from organizations accredited by the ACCME. Physician Assistants attending the Annual Meeting can submit certificates or transcripts showing how many physician CME credits were offered for an activity to the American Association of Physician Assistants and get them "converted" to PA CME credit.**

** Doctors earn AMA PRA Category 1 Credits from CME activities. The AAPA also grants and counts Category 1 CME credits, but those are specifically for PAs and have to come from a provider accredited by the AAPA. Both groups label their credits Category 1 CME, but the labels, though they read the same, refer to different evaluations.

Disclosure of Faculty Financial Affiliations

To comply with the Accreditation Council for Continuing Medical Education (ACCME) Standards of Commercial Support on the need for disclosure and monitoring of proprietary and financial interests that may affect the scientific integrity and balance of content delivered in continuing medical education activities under our auspices, the American College of Mohs Surgery will disclose faculty and commercial relationships at the Annual Meeting.

Disclosure of Discussion of Non-FDA Approved Uses for Pharmaceutical Products and/or Medical Devices

The ACCME requires that all faculty presenters identify and disclose any off-label uses for pharmaceutical and medical device products. The American College of Mohs Surgery recommends that each physician fully review all the available data on new products or procedures prior to instituting them with patients.

Disclaimer

The views expressed and the techniques presented by the speakers of the ACMS-sponsored educational meetings are not necessarily shared or endorsed by the organization. Speakers are required to disclose all relevant conflicts of interest and any unapproved or off-label uses of medical devices or pharmaceutical agents that they discuss, describe, or demonstrate during their presentations.

Meeting attendees should use their independent judgment in applying the information discussed in these educational sessions in the treatment of patients. Handout materials are prepared and submitted for distribution by the presenters, who are solely responsible for its content.

Claim your CME only online!

To get your certificate, visit www.CmeCertificateOnline.com.

Locate the (ACMS) American College of Mohs Surgery listing and select "2012 Mohs College Annual Meeting" event. On the site, **you will be asked to enter a password which is MC12**, and evaluate various aspects of the program (**participants must complete an attendance/evaluation form in order to receive a certificate of completion/attendance**). Your chosen sessions must be attended in their entirety. Partial credit of individual sessions is not available. Your hours will be automatically calculated.

You may then print your certificate immediately (encouraged), anywhere you have internet access. No more waiting for the mail! A copy of the certificate will also be emailed to you in case you need to print additional copies (check your spam filter and junk email folder if you do not see it come through). The emailed copy is simply a backup if you didn't print it right away.

IMPORTANT!

The online certificate site will be available the end of the day May 6, 2012 through June 13, 2012. After that date, the site will be removed and certificates will no longer be available. If you need a CME / CE certificate, you must complete the evaluation and certificate process prior to that date; otherwise you will forfeit your credit for the course.

Please direct any questions regarding the process to: Jillian Davis at JDavis@smithbucklin.com; (651) 789-3722.

Learning Objectives

Upon completion of the Annual Meeting, participants will be able to describe the latest advances in the treatment of skin cancer, discuss recent research findings in the area of Mohs micrographic surgery and cutaneous oncology, and explain new techniques in reconstruction that promote optimal surgical outcomes.

Specific learning objectives, upon completion of the ACMS Annual Meeting include, but are not limited to:

- Identify critical anatomic landmarks and structures that impact functional and cosmetic reconstruction of the nose, eyelids, ears, lips, face, scalp, extremities and nails/digits.
- Compare current reconstructive outcomes and techniques with experienced master surgeons to critically analyze and improve their cosmetic and functional results.
- Incorporate new and established surgical procedures to reconstruct Mohs defects of the nose, eyelids, ears, lips, face, scalp, extremities and nails/digits.
- Identify the histologic features and hallmarks of various cutaneous malignancies, from common to rare.
- Identify artifacts and other technical issues that can negatively impact the quality of Mohs frozen sections, including cases utilizing immunostains, and troubleshoot to improve slide quality.
- Interpret typical Mohs frozen sections and properly map persistent tumor.
- Identify the standard of care treatment for difficult/high-risk cutaneous tumors as well as interdisciplinary approaches to treatments and the prognostic characteristics of the tumor.
- Identify how patient characteristics change appropriate treatment regimens.
- Recognize the importance of mitosis in melanoma staging and the new definition of a positive lymph node.
- Incorporate the new staging system for melanoma into patient counseling and therapy.
- Prevent & treat surgical complications.
- Use pre-operative and post-operative antibiotics appropriately.
- Manage antiplatelet and anticoagulant medications during surgery.
- Identify ethical components of billing.
- Develop a process for “root cause analysis” for errors and incorporate risk management and process improvement in your practice.
- Understand the implications of health care reform and how it is likely to impact dermatology and your practice.

Interest Disclosures

Interest Disclosures

As an organization accredited by the ACCME to sponsor continuing medical education activities, the Institute for the Advancement of Human Behavior (IAHB) is required to disclose any real or apparent conflicts of interest (COI) that any speakers may have related to the content of their presentations.

The IAHB requires that each speaker participating in a program designated for AMA Physician's Recognition Award Category 1 credit disclose any financial interest/arrangement or affiliation with a corporate organization that may impact on his/her presentation (i.e. grants, research support, honoraria, member of speakers' bureau, consultant, major stock shareholder, etc.). In addition, the faculty member must disclose when an unlabeled use of a commercial product or an investigational use not yet approved for any purpose is discussed during the educational activity.

No Interests to Disclose:

Sumaira Z. Aasi, MD
Murad Alam, MD
John G. Albertini, MD
Michael J. Albom, MD
Joseph Alcalay, MD
Sarah Arron, MD
Rupert B. Barry, MB, BCh, BAO
Christian L. Baum, MD
Richard G. Bennett, MD
Michael L. Bentz, MD, FAAP, FACS
Christopher K. Bichakjian, MD
Elizabeth M. Billingsley, MD
Jeremy S. Bordeaux, MD, MPH
Paul H. Bowman, MD
Jerry D. Brewer, MD
David G. Brodland, MD
Clarence W. Brown, Jr., MD
Marc D. Brown, MD
Michael J. Camilleri, MD
Michael Campoli, MD, PhD
Todd V. Cartee, MD
An-Wen Chan, MD, DPhil, FRCPC
Basil S. Cherpelis, MD
Brett M. Coldiron, MD, FACP
Kristina M. Collins, MD
Scott A. B. Collins, MD
Joel Cook, MD
Jonathan L. Cook, MD
W. Patrick Davey, MD, MBA, FACP
Scott M. Dinehart, MD
Leonard M. Dzubow, MD
Daniel B. Eisen, MD
Mary F. Farley, MD
Michael J. Fazio, MD
Galen H. Fisher, MD
Joseph K. Francis, MD
Montgomery O. Gillard, MD
Hugh M. Gloster, Jr., MD
David J. Goldberg, MD, JD
Leonard H. Goldberg, MD
Glenn D. Goldman, MD
Glenn D. Goldstein, MD
S. Tyler Hollmig, MD
Tatyana R. Humphreys, MD
S. Walayat Hussain, MD
Sherrif F. Ibrahim, MD, PhD
Omar A. Ibrahimi, MD, PhD
Luciano J. Iorizzo, III, MD
Brooke A. Jackson, MD
Karen J. Johnson, MD
Aaron K. Joseph, MD
Kent J. Krach, MD
Ken K. Lee, MD
Deborah F. MacFarlane, MD, MPH
Matthew J. Mahlberg, MD
Mary E. Maloney, MD
Jamie L. McGinness, MD
J. Ramsey Mellette, Jr., MD
Gary W. Mendese, MD
Craig C. Miller, MD
Stanley J. Miller, MD
Rachel L. Moore, MD
Neil J. Mortimer, MBChB, FRCP, FRACP
Ann G. Neff, MD
Marcy Neuburg, MD
Tri H. Nguyen, MD
Kevin W. O'Bryan, MD
Suzanne M. Olbricht, MD
Kenny J. Omlin, MD
Clark C. Otley, MD
Scott E. Parazynski, MD
James R. Patrinely, MD
Désirée Ratner, MD
June K. Robinson, MD
Randall K. Roenigk, MD
Thomas E. Rohrer, MD
Paul J. M. Salmon, MD
Carl F. Schanbacher, MD
Chrysalyne D. Schmults, MD
Roberta D. Sengelmann, MD
Daniel M. Siegel, MD
John W. Skouge, MD
Joseph F. Sobanko, MD
Thomas Stasko, MD
John M. Strasswimmer, MD, PhD
Neil A. Swanson, MD
Zeina S. Tannous, MD
Valencia D. Thomas, MD
Abel Torres, MD, JD
Nicole F. Velez, MD
Allison T. Vidimos, MD
Carl Vinciullo, MD
Carl V. Washington, Jr., MD
J. Michael Wentzell, MD
Christopher W. Weyer, DO
Andrea Willey, MD
Ashley Wysong, MD, MS
Mark J. Zalla, MD
Nathalie C. Zeitouni, MD
Isaac Zilinsky, MD
Fiona O'Reilly Zwald, MD

Scientific Program – Thursday, May 3

7:00 am – 9:00 pm

Slide Library and Diagnostic Quality Control Self-examination — *Embassy Room; 2nd Level*

7:00 – 8:30 am

Concurrent Morning Mini-sessions

103.1 Facial Reconstruction — *Crystal Room; 3rd Level*

At the conclusion of this session, participants should be able to:

1. Analyze a surgical defect to formulate a reconstructive plan;
2. Decide the best operative technique to achieve aesthetic and functional success;
3. Understand the limitations of single staged repairs for more complex surgical defects.

Joel Cook, MD; Isaac Zilinsky, MD

103.2 Reconstructive Challenges: Lip & Ear — *Moulin Rouge; Lobby Level*

At the conclusion of this session, participants should be able to:

1. Use multiple reconstructive options for a variety of defects involving the ear and perioral anatomic units;
2. Evaluate the area surrounding a surgical defect, and design an appropriate reconstruction by considering the pertinent surface anatomy, surgical anatomy, and tissue reservoirs available;
3. Avoid techniques which are more likely to lead to complications.

Paul H. Bowman, MD; J. Ramsey Mellette, Jr., MD

103.3 Unusual Cutaneous Carcinomas: On the Road with Thelma and Louise — *Chancellor Room; 3rd Level*

At the conclusion of this session, participants should be able to:

1. Identify cases during preoperative work-up which may be challenging and require extra resources or interdisciplinary collaboration;
2. Understand the evidence base for treatment of unusual skin cancers;
3. Formulate an individualized approach to rare and complicated cutaneous cancers.

Suzanne M. Olbricht, MD; Allison T. Vidimos, MD

103.4 Immunohistochemistry — *Regal Room; B-2 Level*

At the conclusion of this session, participants should be able to:

1. Discuss the advantages, indications, and expanding role of immunohistochemical stains in Mohs micrographic surgery for melanoma and non-melanoma skin cancer;
2. Select proper clinical and histologic scenarios where special stains may assist in tumor diagnosis and extirpation and identify where potential pitfalls in their use may occur;
3. Identify key laboratory equipment and staffing personnel that are essential for developing an in-house immunostain lab.

Basil S. Cherpelis, MD; Joseph F. Sobanko, MD

103.5 Bleeding and Thrombosis: How to Prevent and to Manage — *Regent Room; 3rd Level*

At the conclusion of this session, participants should be able to:

1. Identify safe and effective strategies for perioperative management of anticoagulants in patients undergoing dermatologic surgery;
2. Discuss effective strategies for reducing the risk of bleeding complications in patients on potent anticoagulants;
3. Recognize recently approved anticoagulants, their mechanisms of action, and potential for hemorrhagic complications.

Joseph Alcalay, MD; Clark C. Otley, MD

8:45 – 9:30 am

Opening Session & Welcome — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:

1. Discuss current policy, political, and reimbursement information regarding the practice of Mohs surgery;
2. Update membership on the activities of the Mohs College and its many committees;
3. Discuss the importance of patient safety and demonstrate how safe Mohs surgery is;
4. Understand the AAD's strategic focus and some of the activities in place to advance it;
5. Understand the challenges and opportunities that the ACMS and AAD will face in the coming year.

Brett M. Coldiron, MD, FACP, ACMS President; Daniel M. Siegel, MD, AAD President; David G. Brodland, MD

9:30 – 10:30 am

Literature Review — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should:

1. Be able to incorporate new information from the related fields of plastic surgery and otolaryngology into the day to day management of complex tumors in the clinical dermatologic surgery practice;
2. Learn of key developments in cutaneous oncology including advances in melanoma research and treatment and the role of emerging immunosuppressants on cutaneous malignancy;
3. Learn of recent advances in oculoplastic surgery including novel approaches to reconstruction of the eye and canthal support systems and developments in periorbital anatomy.

Moderators: Elizabeth M. Billingsley, MD; Mary F. Farley, MD

Speakers:

Oculoplastics Update

Andrea Willey, MD

Plastics/Head and Neck Update

Glenn D. Goldman, MD

Cutaneous Oncology Update

Carl Vinciullo, MD

Scientific Program – Thursday, May 3

10:30 – 11:30 am

Scientific Abstract Session *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to understand and identify new research developments in Mohs surgery and oncology.

Moderators: Brooke A. Jackson, MD; Marcy Neuburg, MD

10:32 – 10:40 am

The Evolving Conception and Management Challenges of Undifferentiated Pleomorphic Sarcoma

S. Tyler Hollmig, MD[1]; Brent Kirkland, MD[1]; Michael Henderson, BA[1]; Hayes B. Gladstone[1], MD; Kerri Rieger, MD, PhD[1,2]; Robert West, MD, PhD[2]; Uma Sundram, MD, PhD[1,2]

1. Dermatology, Stanford University Medical Center, Palo Alto, CA, United States 2. Pathology, Stanford University Medical Center, Palo Alto, CA, United States

10:42 – 10:50 am

Optimizing Mohs Frozen Sections: Clini-RF Rapid Freeze Histology

Jamie L. McGinness, MD[1]; Chandra Goodman, BS, HTL[1]; Melissa P. Chiang, MD, JD[4]; Neil N. Farnsworth, MD[1]; Michael R. Migden, MD[2]; Thuy L. Phung, MD, PhD[3]; Tri H. Nguyen, MD[1]

1. Dermatology, Northwest Diagnostic Clinic, Houston, TX, United States 2. Dermatology, MD Anderson Cancer Center, Houston, TX, United States 3. Department of Pathology and Immunology, Baylor College of Medicine, Houston, TX, United States 4. Integrated Dermatology, Houston, TX, United States

10:52 – 11:00 am

DermBase: A Web-based Research Platform Producing a 19,061 Tumor Prospective Mohs Study (and More)

John M. Strasswimmer, MD, PhD[1,2]; Murad Alam, MD[3]

1. Director, Melanoma & Cutaneous Oncology Program, Lynn Cancer Institute, Boca Raton, FL, United States 2. Biochemistry, Florida Atlantic University, Boca Raton, FL, United States 3. Dermatologic Surgery, Northwestern University, Chicago, IL, United States

11:02 – 11:10 am

Skin Cancer Outcomes in Patients with Chronic Lymphocytic Leukemia: A 20-year Retrospective Cohort Study

Nicole F. Velez, MD[1,2]; Pritesh Karia, MPH[1]; Ye Guo, MSCS[1]; Victor A. Neel, MD, PhD[2]; Chrysalyne D. Schmults, MD[1]

1. Dermatology, Brigham and Women's Hospital, Boston, MA, United States 2. Dermatology, Massachusetts General Hospital, Boston, MA, United States

11:12 – 11:20 am

Adnexal Carcinomas: A Case Series and Comparison of Mohs Micrographic Surgery vs. Wide Local Excision for Local Treatment

Craig C. Miller, MD[1]; Preethi R. Raghu; Paul Bogner, MD[3,1]; Nathalie C. Zeitouni, MD[1]

1. Dermatology, Roswell Park Cancer Institute, Buffalo, NY, United States 2. School of Medicine, Albany Medical College, Albany, NY, United States 3. Pathology, Roswell Park Cancer Institute, Buffalo, NY, United States

11:22 – 11:30 am

Is Metastatic Basal Cell Carcinoma on the Rise?: A Systematic Review from 1981-2011

Ashley Wysong, MD, MS[1]; Sumaira Z. Aasi, MD[1]; Jean Y. Tang, MD, PhD[1]

1. Department of Dermatology, Stanford University, Stanford, CA, United States

11:30 am – 12:15 pm

Reconstruction Pearls Abstract Session *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to understand and identify new research developments in Mohs surgery and oncology.

Moderators: Jeremy S. Bordeaux, MD, MPH; Karen J. Johnson, MD

11:34 – 11:40 am

Myocutaneous Island Pedicle Flaps of the Upper Eyelid

Joseph K. Francis, MD[1,2]; Richard G. Bennett, MD[1,2]

1. Dermatology, Keck School of Medicine at USC, Los Angeles, CA, United States 2. Medicine (Dermatology), David Geffen School of Medicine at UCLA, Los Angeles, CA, United States

11:41 – 11:47 am

A New Spin on the Spiral Flap: Experience with Sixty-three Patients

Matthew J. Mahlberg, MD[1,2]; Brian C. Leach, MD[2]; Joel Cook, MD[2]

1. Dermatology Associates of Colorado, Englewood, CO, United States 2. Department of Dermatology and Dermatologic Surgery, Medical University of South Carolina, Charleston, SC, United States

11:48 – 11:54 am

Prolonging the Primary Pivoting Point: Mathematical Effect of Prolonging the Primary Burow's Triangle on Trilobed Transposition Flap Rotation

Jamie L. McGinness, MD[1]; Tri H. Nguyen, MD[1]

1. Dermatology, Northwest Diagnostic Clinic, Houston, TX, United States

Scientific Program – Thursday, May 3

11:55 am – 12:01 pm

The Use of an Orbicularis Oris Hinge Flap to Recreate Volume and the Convex Contour of a Deep Lower Lip Vermilion Defect

Rupert B. Barry, MB, BCh, BAO[1]

1. Dermatology Surgical Unit, Royal Victoria Infirmary, Newcastle upon Tyne, United Kingdom

12:02 – 12:08 pm

Z-plasty for Correction of Nasofacial Webbing

Joseph K. Francis, MD[1,2]*; Richard G. Bennett, MD*[1,2]

1. Dermatology, Keck School of Medicine at USC, Los Angeles, CA, United States 2. Medicine (Dermatology), David Geffen School of Medicine at UCLA, Los Angeles, CA, United States

12:09 – 12:15 pm

The Utility of the Pursestring Pulley Combination Stitch for the Repair of a Wide Variety of Nasal Defects Following Mohs Surgery

Kenny J. Omlin, MD[1,2]

1. Dermatology, University of California, Davis, Sacramento, CA, United States 2. Mohs Surgery, Kaiser Premanente, Napa, CA, United States

12:15 – 1:15 pm

Networking Lunch in Exhibit Hall — *International Ballroom; 2nd Level*

Enjoy lunch and the time to network with your colleagues!

1:15 – 2:15 pm

Health Care Reform — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:

1. Understand how to navigate the political process;
2. Learn about key elements in health care reform;
3. Prepare for the future political impact on the practice of Mohs surgery and dermatologic surgery.

Moderator: W. Patrick Davey, MD, MBA, FACP

Speakers:

A Primer: The Political Jungle
W. Patrick Davey, MD, MBA, FACP

Accountable Care Organizations: On the Outside Looking In
Scott M. Dinehart, MD

RUC & Roll
Scott A. B. Collins, MD

What the AAD and ACMS are Doing in the Political Arena
Daniel M. Siegel, MD

2:15 – 3:15 pm

Masters' Pearls ♦ — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:

1. Understand the significance of the history and growth of Mohs surgery over the past 2-3 decades;
2. Understand the unique challenges and rewards of the practice of Mohs surgery;
3. Understand the elements of how to be a successful and competent Mohs surgeon.

Moderators: Marc D. Brown, MD; Leonard H. Goldberg, MD
Panelists: Michael J. Albom, MD; John W. Skouge, MD; Neil A. Swanson, MD

♦ *Represents advanced expertise level course*

3:15 – 3:30 pm

Break

3:30 – 4:30 pm

Tromovitch Award Abstract Session — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:

1. Become updated on recent advances in cutaneous oncology and pathology;
2. Become aware of the current state of the practice of Mohs surgery;
3. Learn about young investigators' research and scholarly activities.

Moderators: Todd V. Cartee, MD (2011 Tromovitch Award Winner); Tatyana R. Humphreys, MD

3:34 – 3:42 pm

Assessment of the Clinical and Pathologic Characteristics of Perineural Invasion in Patients with Cutaneous Squamous Cell Carcinoma

Michael Campoli, MD, PhD[1,2]*; David G. Brodland, MD*[2]*; John A. Zitelli, MD*[2]

1. Fairview Medial Group, Wyoming, MN, United States 2. Zitelli and Brodland P.C., Pittsburgh, PA, United State

3:42 – 3:50 pm

An Evolving Paradigm for the Workup and Management of Very High Risk Cutaneous Squamous Cell Carcinoma

Kevin W. O'Bryan, MD[1]*; Désirée Ratner, MD*[1]

1. Dermatology, Columbia University Medical Center, New York, NY, United States

Scientific Program – Thursday, May 3

3:50 – 3:58 pm

The Importance of Vertical Pathology of the Debulking Specimen during Mohs Micrographic Surgery for Lentigo Maligna/Melanoma In Situ

Luciano J. Iorizzo, III, MD[1]; Isaac M. Chocron, MD[1]; Wilfred A. Lumbang, MD[1]; Thomas Stasko, MD[1]

1. Medicine, Division of Dermatology, Vanderbilt University Medical Center, Nashville, TN, United States

3:58 – 4:06 pm

Perceptions of Expertise in Cutaneous Oncologic Surgery: What the Lay Public and Primary Care Physicians Think

Omar A. Ibrahimi, MD, PhD[1,2]; April W. Armstong, MD, MPH[3]; Haider K. Bangash [4]; Lawrence J. Green, MD[5]; Murad Alam, MD[6]; Daniel B. Eisen, MD[3]

1. Dermatology, UConn Health Center, Farmington, CT, United States 2. Wellman Center for Photomedicine, Harvard Medical School, Boston, MA, United States 3. Dermatology, UC Davis, Sacramento, CA, United States 4. Aga Kahn University Medical College, Karachi, Pakistan 5. Private Practice, Rockville, MD, United States 6. Dermatology, Northwestern University, Chicago, IL, United States

4:06 – 4:14 pm

Investigation of Hyfrecators and their In Vitro Interference with Implantable Cardiac Devices

Christopher W. Weyer, DO[1]; Ronald J. Siegle, MD[2]; Guillaume Girard, Eng[3]

1. Dermatology, Cleveland Clinic Foundation, Cleveland, OH, United States 2. Otolaryngology, The Ohio State University, Columbus, OH, United States 3. Cardiac Rhythm Management, Medtronic, Mounds View, MN, United States

4:14 – 4:22 pm

IMP3, A Novel Immunohistochemical Marker that Highlights Keratinocyte-derived Skin Cancers Enabling Differentiation from Benign Tumors during Mohs Micrographic Surgery

Gary W. Mendese, MD[1,2]; Gary S. Rogers, MD[2]; Donald J. Grande, MD[1]

1. Mystic Valley Dermatology, Stoneham, MA, United States 2. Dermatology, Tufts University School of Medicine, Boston, MA, United States

4:22 – 4:30 pm

Hot off the Press: Assessment of the Relative Perceived Newsworthiness of Cosmetic and Surgical Dermatology Using Content Analysis of Print News Media

Kristina M. Collins, MD[1,2]; Emily J. Fisher, MD[1,2]; Mollie A. MacCormack, MD[1,2]; Suzanne M. Olbricht, MD[1,2]

1. Department of Dermatologic Surgery, Lahey Clinic, Burlington, MA, United States 2. Harvard Department of Dermatology, Boston, MA, United States

4:30 – 5:30 pm

Keynote Address
Extreme High Altitude Medicine
Imperial Ballroom; B-2 Level

Introduction: Deborah F. MacFarlane, MD, MPH
Keynote Speaker: Scott E. Parazynski, MD

5:30 – 7:30 pm

Exhibit Hall Grand Opening & Welcome Reception
International Ballroom; 2nd Level

Scientific Program – Friday, May 4

7:00 am – 9:00 pm

Slide Library and Diagnostic Quality Control Self-examination — *Embassy Room; 2nd Level*

7:00 – 8:30 am

Concurrent Morning Mini-sessions

203.1 Strategies for Practice Efficiency — *Regent Room; 3rd Level*

At the conclusion of this session, participants should be able to:

1. Identify mechanisms by which they may optimize the patient experience and satisfaction prior to seeing the physician by improving telephone and web contact, scheduling, reception experience, and pre-consult waiting;
2. Identify mechanisms through which the nurse / physician - patient experience may be enhanced or optimized to improve both patient and provider satisfaction, including increased surgical volume and decreasing patient waiting times;
3. Identify techniques that should promote increased back office efficiency resulting in shorter collection times, minimizing appeals, and achieving higher net collections greater than 98%;
4. Identify techniques that should promote referring physician satisfaction and increase surgical volume.

Clarence W. Brown, Jr., MD; Aaron K. Joseph, MD

203.2 Improving your Publication Track Record: Editors' Recommendations — *Regal Room; B-2 Level*

At the conclusion of this session, participants should be able to:

1. Determine the appropriate journal to which to submit the manuscript;
2. Understand the editorial process;
3. Organize the contents of the paper according to: what was done, why you did it, how you did it, & what you learned.

Désirée Ratner, MD; June K. Robinson, MD

203.3 Periocular Surgery: Practical Pearls & Complications — *Moulin Rouge; Lobby Level*

At the conclusion of this session, participants should be able to:

1. Identify important periocular and ocular anatomic features;
2. Understand the important factors in periocular Mohs repair and other periocular surgical procedures;
3. Prevent and manage periocular surgical complications.

Hugh M. Gloster, Jr., MD; Ann G. Neff, MD

203.4 Nose-ology: The Systematic Approach to Nasal Reconstruction — *Crystal Room; 3rd Level*

At the conclusion of this session, participants should be able to:

1. Develop a rational plan for reconstruction of Mohs defects of the nose;
2. Generate a list of reconstructive options for closure of nasal defects ranging from small to very large;
3. Identify flaps that are particularly useful on certain anatomic subunits of the nose;
4. Discern situations when a flap is a preferable form of closure over grafts and vice versa.

David G. Brodland, MD; Tatyana R. Humphreys, MD

203.5 Managing Skin Cancer without a Knife — *Chancellor Room; 3rd Level*

At the conclusion of this session, participants should be able to:

1. Describe the indications to treat skin cancer with creams and lasers, light-based technology and all proper and available medications;
2. Properly evaluate a patient for surgery and determine proper indications for surgery;
3. Identify the indication for radio therapy;
4. Understand some of the limitations of non-invasive skin cancer therapy.

Leonard H. Goldberg, MD; Abel Torres, MD, JD

8:45 – 9:45 am

Dermpath Challenges: Difficult Cases from the Mayo Clinic — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:

1. Recognize potential pitfalls associated with subtotal biopsies;
2. Recognize challenges associated with frozen section interpretation of common tumors, benign proliferations, and less common anatomic locations;
3. Understand the implications associated with the language of a pathology report.

Moderator: Christian L. Baum, MD
Guest Speaker: Michael J. Camilleri, MD

9:45 – 10:45 am

Mohs Frozen Section Challenges — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:

1. Improve competence in interpreting complex histopathology during Mohs surgery;
2. Discuss various subtleties of tumor evaluation on frozen sections and identify common pitfalls encountered in the evaluation of frozen sections;
3. Consider critical aspects of decision making for histopathologic cases during Mohs surgery.

Moderators: Zeina S. Tannous, MD; Valencia D. Thomas, MD
Panelists: Stanley J. Miller, MD; Carl F. Schanbacher, MD

Scientific Program – Friday, May 4

10:45 – 11:00 am

Break

11:00 am – 12:00 pm

Melanoma Update — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:
1. Discuss the recent changes in the AJCC melanoma staging system and their application to clinical practice;
2. Apply the current evaluation and treatment guidelines for early stage melanoma to practice;
3. Discuss the current data on the use of sentinel lymph node biopsy for melanoma.

Christopher K. Bichakjian, MD

12:00 – 6:30 pm

Exhibit Hall Open — *International Ballroom; 2nd Level*

12:00 – 1:30 pm

ACMS Annual Business Meeting & Lunch (Members only) — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to understand past and future activities, achievements, and goals of the ACMS.

Moderator: Brett M. Coldiron, MD, FACP

1:30 – 2:30 pm

Systematic Eyelid Reconstruction ♦ — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:
1. Understand applied eyelid and orbital anatomy to achieve physiologic reconstructions;
2. Develop a reconstructive ladder according to location and size of the periorbital tumor defect;
3. Anticipate and manage postoperative periorbital complications.

Introduction: Deborah F. MacFarlane, MD, MPH

Guest Speaker: James R. Patrinely, MD

♦ Represents advanced expertise level course

2:30 – 3:30 pm

Complications: Prevention, Early Detection, & Management — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:
1. Promptly recognize hemorrhagic, periocular and nasal complications following reconstructive surgery;
2. Prevent and understand risk factors for developing hemorrhagic, periocular and nasal complications;
3. Select the best management strategies for hemorrhagic, periocular and nasal complications.

Moderators: Ken K. Lee, MD; Rachel L. Moore, MD

Speakers:

Periocular Complications

James R. Patrinely, MD

Bleeding Complications

Hugh M. Gloster, Jr., MD

Nasal Ala and Valve Complications

Tri H. Nguyen, MD

3:30 – 4:30 pm

Tumor Board ♦ — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:
1. Discuss the diverse clinical presentation and management of challenging cases of non-melanoma skin cancer in high risk patients;
2. Discuss unusual clinical presentations and management of malignant melanoma in high risk patients;
3. Discuss a multidisciplinary approach for aggressive cutaneous malignancy, including appropriate staging techniques, use of Mohs surgery, adjuvant therapies and potential benefit of emerging therapies.

Moderators: Mark J. Zalla, MD; Fiona O'Reilly Zwald, MD

Panelists: Marc D. Brown, MD; Clark C. Otley, MD; Randall K. Roenigk, MD; Thomas Stasko, MD; Nathalie C. Zeitouni, MD

♦ Represents advanced expertise level course

4:30 – 6:30 pm

Visit the Exhibit Hall and Posters — *International Ballroom; 2nd Level*

4:30 – 6:00 pm

Fellowship Training Directors' Session — *Regent Room; 3rd Level*

6:00 – 7:00 pm

Fellows-in-Training Reception — *Moulin Rouge; Lobby Level*

For Program Directors and current FITs only

Scientific Program – Saturday, May 5

7:00 am – 9:00 pm

Slide Library and Diagnostic Quality Control Self-examination — *Embassy Room; 2nd Level*

7:00 – 8:30 am

Concurrent Morning Mini-sessions

303.1 Coding: Up Close and Personal — *Moulin Rouge; Lobby Level*

At the conclusion of this session, participants should be able to:

1. Properly utilize ICD-9 and begin to recognize the components of ICD-10;
2. Employ the latest CPT coding to appropriately bill for visits and procedures;
3. Append appropriate modifiers to multiple procedures when done concomitantly, and be aware of pitfalls that can result in RAC audits.

Murad Alam, MD; Glenn D. Goldman, MD

303.2 Sunscreen Update — *Regal Room; B-2 Level*

At the conclusion of this session, participants should be able to:

1. Understand and explain to their patients the rationale, evidence and latest developments regarding sunscreens;
2. Understand the 'Sun protection & Vitamin D' debate;
3. Gain a unique Australasian insight into the consequences of sun damage.

S. Walayat Hussain, MD; Neil J. Mortimer, MBChB, FRCP, FRACP; Paul J. M. Salmon, MD

303.3 High Risk Tumors: Transplant Cases, Squamous Cell Carcinoma, & Immunosuppression ♦ — *Gold Room; 2nd Level*

At the conclusion of this session, participants should be able to:

1. Utilize recent advances in the management of high risk skin cancer in the immunosuppressed and normocompetent population;
2. Learn which recent adjuvant therapies may be of benefit in the treatment of high risk tumors;
3. Learn about the role of various clinical scenarios of immunosuppression in the biological behavior of high risk tumors.

Carl V. Washington, Jr., MD; Fiona O'Reilly Zwald, MD

♦ Represents advanced expertise level course

303.4 Advanced Practice Management — *Regent Room; 3rd Level*

At the conclusion of this session, participants should be able to:

1. Identify and understand successful practice management strategies;
2. How to increase revenue streams in a Mohs practice;
3. How to better manage your business and medical personnel.

Glenn D. Goldstein, MD; Thomas E. Rohrer, MD

303.5 Dermpath Challenges: Interactive Session — *Crystal Room; 3rd Level*

At the conclusion of this session, participants should be able to:

1. Differentiate benign and malignant histology on frozen sections;
2. Determine when to seek permanent sections;
3. Describe rare benign and malignant neoplasms for the Mohs surgeon.

Zeina S. Tannous, MD

8:45 – 9:45 am

Reconstruction of Mohs Defects: A Plastic Surgeon's Perspective ♦ — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:

1. Optimize patient selection and preparation for Mohs defect reconstruction;
2. Identify a broad variety of techniques for closure of Mohs defects;
3. Manage complications associated with Mohs defect reconstruction.

Introduction: Deborah F. MacFarlane, MD, MPH
Guest Speaker: Michael L. Bentz, MD, FAAP, FACS

♦ Represents advanced expertise level course

9:45 – 10:45 am

How Would You Reconstruct It? ♦ — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to

1. Evaluate multiple reconstruction options for common surgical defects;
2. Appreciate nuances in the execution of reconstructive options to greatly enhance outcomes;
3. Recognize potential pitfalls for some reconstructive options in certain locations.

Moderator: Roberta D. Sengelmann, MD
Guest Panelist: Michael L. Bentz, MD, FAAP, FACS
Panelists: Richard G. Bennett, MD; David G. Brodland, MD; Galen H. Fisher, MD; Désirée Ratner, MD

♦ Represents advanced expertise level course

10:45 – 11:45 am

The Undesirable Result ♦ — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:

1. Identify undesirable results in reconstructive surgery;
2. Develop strategies to avoid less than optimal surgical outcomes;
3. Design surgical revision procedures to improve final results.

Moderator: Jonathan L. Cook, MD
Panelists: Richard G. Bennett, MD; Leonard M. Dzubow, MD; Tri H. Nguyen, MD; J. Michael Wentzell, MD

♦ Represents advanced expertise level course

Scientific Program – Saturday, May 5

11:45 am – 1:00 pm

Lunch in the Exhibit Hall — *International Ballroom; 2nd Level*

—and—

Women's Dermatology Society Networking Luncheon — *Regent Room; 3rd Level*

Pre-registration required

1:00 – 2:00 pm

Transplant Update — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:

1. Understand the risk factors and outcomes of skin cancer in organ transplant recipients;
2. Understand the current recommendations for surgical management of skin cancer in organ transplant recipients;
3. Gain a deeper understanding of the newer systemic medications used to treat high risk skin cancers in organ transplant recipients, including the management of these medications and the multidisciplinary approach necessary for optimal care.

Moderators: Sarah Arron, MD; Jerry D. Brewer, MD

Speakers:

Basic Prevention and Treatment of Skin Cancer in Organ Transplant Recipients: What have we learned?
Thomas Stasko, MD

Update on Skin Cancer Epidemiology: Risk Factors and Outcomes in Transplant Recipients
An-Wen Chan, MD, DPhil, FRCPC

Risk Stratification in SCC and Management Implications in Transplant Recipients
Chrysalyne D. Schmults, MD

Systemic Agents for SCC in Transplant Recipients
Sherrif F. Ibrahim, MD, PhD

2:00 – 3:00 pm

Coding Update — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:

1. Understand RAC (Recovery Audit Contractor) Medicare audits and know what to do if you are audited;
2. Understand the Mohs AUC (Appropriate Use Criteria), including how they were developed, why they were developed, and what impact they have for your practice and the future of Mohs surgery;
3. Be aware of new coding and reimbursement changes that impact your practice, as well as understand the changes related to the upcoming revaluation of Mohs codes.

Moderator: Scott A. B. Collins, MD

Speakers:

RAC Audits
Scott M. Dinehart, MD; Richard G. Bennett, MD

Mohs Appropriate Use Criteria
Mark J. Zalla, MD

CPT, RUC, & Coding Updates
Murad Alam, MD; Scott A. B. Collins, MD

3:00 – 4:00 pm

Anatomy of a Lawsuit — *Imperial Ballroom; B-2 Level*

At the conclusion of this session, participants should be able to:

1. Incorporate disclosure into your practice;
2. Develop a process for root cause analysis in your practice;
3. Incorporate risk management and process improvement into your practice.

Moderator: Mary E. Maloney, MD

Panelists: David J. Goldberg, MD, JD; Abel Torres, MD, JD

Sunday, May 6

Please note: General Session room change

7:30 – 8:30 am

Diagnostic Quality Control Exam Review — *International Ballroom; 2nd Level*

At the conclusion of this session, participants should be able to:

1. Understand the importance of dermatopathology in Mohs surgery;
2. Improve dermatopathology skills to help distinguish benign findings from malignant;
3. Recognize errors in frozen-section tissue processing.

Moderator: Sumaira Z. Aasi, MD

Panelists: Daniel B. Eisen, MD; Montgomery O. Gillard, MD; Kent J. Krach, MD

8:30 – 10:00 am

Masters Session on Reconstruction ♦ — *International Ballroom; 2nd Level*

At the conclusion of this session, participants should be able to:

1. Evaluate challenging patients for nasal reconstructions and formulate novel repair options;
2. Understand the variables in planning repairs of the nasal ala;
3. Comprehend how one flap may become another and which reconstructive "rules" may be worth breaking.

Moderator: Leonard M. Dzubow, MD

Panelists: John G. Albertini, MD; Michael J. Fazio, MD; J. Michael Wentzell, MD

♦ *Represents advanced expertise level course*

10:00 am

Meeting Adjourns

10:32 – 10:40 am

PRESENTER: S. Tyler Hollmig, MD

TITLE: The Evolving Conception and Management Challenges of Undifferentiated Pleomorphic Sarcoma

AUTHORS: S. Tyler Hollmig, MD[1]; Brent Kirkland, MD[1]; Michael Henderson, BA[1]; Hayes B. Gladstone[1], MD; Kerri Rieger, MD, PhD[1,2]; Robert West, MD, PhD[2]; Uma Sundram, MD, PhD[1,2]

INSTITUTIONS: 1. Dermatology, Stanford University Medical Center, Palo Alto, CA, United States 2. Pathology, Stanford University Medical Center, Palo Alto, CA, United States

PURPOSE: Undifferentiated pleomorphic sarcoma (UPS) represents a rare and aggressive tumor. Mohs micrographic surgery (MMS) has been reported as an effective treatment, although most cases were published before advances in cytopathological techniques led to reclassification of many tumors. Our primary objective was to evaluate a contemporary cohort of UPS in order to analyze for the most effective management practices. As a secondary goal, we attempted to clarify the immunohistochemical (IHC) staining profile of UPS, particularly as compared to atypical fibroxanthoma (AFX). Whereas the antibody LN-2 (CD74) has been purported by numerous authors as able to distinguish between these tumors, and to predict those AFX likely to exhibit aggressive behavior, there has never been a dedicated study to confirm the utility of this marker.

DESIGN: We reviewed all cases of UPS diagnosed at our institution from January 1995–December 2010, evaluating 839 records to identify 36 patients undergoing management of tumors of the head and/or neck. We collected demographic information, along with tumor location and size, IHC staining, treatment methods, presence of immunosuppression, and follow-up data for each patient. We also performed LN-2 staining of 73 UPS and 14 AFX specimens using an identical staining procedure, antibody clone, and scoring protocol as described by previous investigators. This study was approved by our Institutional Review Board.

SUMMARY: Of the total 36 patients (mean age 67 years) with UPS meeting inclusion criteria who were managed at our institution, 17 (47%) experienced local tumor recurrence and 10 (28%) developed metastases. Of 9 patients initially treated with MMS, 7 (78%) experienced recurrence (mean follow-up 19 months), compared to 10/24 (42%) treated with wide local excision (WLE; mean follow-up 53 months) (P=.065). When compared to the cumulative recurrence rate of all UPS/MFH treated with MMS reported before the year 2000 (7.4%), the mean contemporary recurrence rate of tumors treated with MMS reported after 2000 is significantly higher (58.8%) (P<.0001).

Of 73 UPS specimens available for IHC staining, 5 (6.85%) were immunoreactive for LN-2 (>30% of tumor cells staining), as compared to 3/14 (21.4%) AFX (P=.146), while control specimens stained strongly with LN-2 (Figure 1). One of 2 (50%) clinically aggressive AFX stained with this marker, as compared with 2/12 AFX that did not recur or metastasize (P=.429).

CONCLUSION: Our study is consistent with reports of UPS as an aggressive neoplasm and describes the largest population treated with MMS in three decades (Table 1). Recent reports of higher recurrence rates may be explained by the changing conception of UPS, along with a propensity for in-transit metastases. IHC is helpful in evaluating these tumors, and serves most effectively as a tool to rule out other similar-appearing neoplasms rather than providing a specific profile for UPS. Our results do not support the use of LN-2 for distinguishing UPS from AFX. Furthermore, LN-2 did not appear to predict the clinical behavior of AFX. MMS represents the treatment of choice for AFX and a valuable therapeutic option for certain UPS, where it is likely to provide a tissue-sparing advantage and comparable recurrence rates as compared to WLE.

Table 1. Studies reporting treatment of MFH/UPS with MMS

Study	Dzubow	Brown and Swanson	Huether	Abstract Author
Year of publication	1988	1989	2001	Under Review
Cases (#)	2	25	7	9
Mean diameter (cm)	1.4	3	3	3.56
Primary Tumor, N (%)	1 (50)	12 (48)	5 (71.4)	9 (100)
Reported use of IHC	Y	N	Y	Y
Follow-up (mean, mos)	8	36	45.6	18.9
Recurrence, N (%)	0 (0)	2 (8)	3 (43)	7 (77.8)

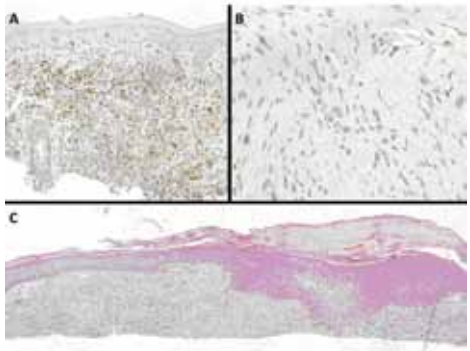


Figure 1. (A) AFX staining strongly with LN-2 (20X), as compared to (B) higher power view of UPS staining only sparsely with LN-2 (40X). Panel C depicts a tumor diagnosed as AFX on this insufficient biopsy specimen that was later reclassified as MFH during MMS, thus emphasizing the diagnostic importance of deep margin evaluation (H&E, 4X).

Scientific Abstract Session – Thursday, May 3: 10:30 – 11:30 am

10:42 – 10:50 am

PRESENTER: Jamie L. McGinness, MD

TITLE: **Optimizing Mohs Frozen Sections: Clini-RF Rapid Freeze Histology**

AUTHORS: Jamie L. McGinness, MD[1]; Chandra Goodman, BS, HTL[1]; Melissa P. Chiang, MD, JD[4]; Neil N. Farnsworth, MD[1]; Michael R. Migden, MD[2]; Thuy L. Phung, MD, PhD[3]; Tri H. Nguyen, MD[1]

INSTITUTIONS: 1. Dermatology, Northwest Diagnostic Clinic, Houston, TX, United States 2. Dermatology, MD Anderson Cancer Center, Houston, TX, United States 3. Department of Pathology and Immunology, Baylor College of Medicine, Houston, TX, United States 4. Integrated Dermatology, Houston, TX, United States

PURPOSE: Freeze artifact is a limitation of frozen section histology and is dependent on freezing time and temperature. The best histology results from snap freezing tissue as quickly as possible and as cold as possible. It has previously been reported that flash freezing of frozen sections for Mohs surgery with the Histobath (Thermo/Shandon Histobath Chiller, Pittsburgh, PA) minimizes freeze artifact and speeds slide turnaround time.[1] The Histobath, however, is no longer manufactured and not readily available and thus obsolete.

The purpose of this study was to evaluate a commercially available alternative to the Histobath, the Clini-RF (RF=Rapid Freeze, Bright Instruments, England). The Clini-RF is an ultra-low temperature freezer with two chambers; the upper chamber is air cooled at -40°C and the lower chamber is liquid cooled (Novec 7000 fluid, 3M) at -80°C. The Novec fluid is a novel engineered fluid with superior safety features compared to traditional methylbutane.

DESIGN: Our study randomized 300 consecutive Mohs sections to one of three methods for frozen section processing: 1) cryoembedder alone, 2) cryoembedder with histobath, 3) cryoembedder with the Clini-RF. All specimens were processed by the same histotechnician until each method reached 100 sections. All 300 slides were evaluated by 6 physicians (3 ACMS Mohs surgeons, 1 medical dermatologist, 1 pathologist, and 1 dermatopathologist- all blinded to the method of slide preparation) and graded on several histologic criteria on a 1-5 scale.

SUMMARY: Pre-study trials demonstrate superior histologic quality for the cryoembedder with Clini-RF method (Figures 1, 2). Preliminary studies were done using Burow's triangles from Mohs repairs. Each Burow's triangle was divided into three specimens and processed by each of the above methods. The sections were then evaluated by two blinded Mohs surgeons. In greater than 95% of examined specimens, the Clini-RF method greatly reduced processing artifact and produced superior frozen section histology relative to the other methods.

CONCLUSION: Freeze artifact compromises histologic evaluation and can potentially decrease the effectiveness of Mohs surgery. The Clini-RF offers a rapid fluid heat extraction method in a novel engineered fluid that achieves outstanding frozen section histology. We present a modification to frozen section histology that allows superior histologic quality approaching the quality seen with permanent histology sections.

1. Dermatol Surg 2011;37:503–509

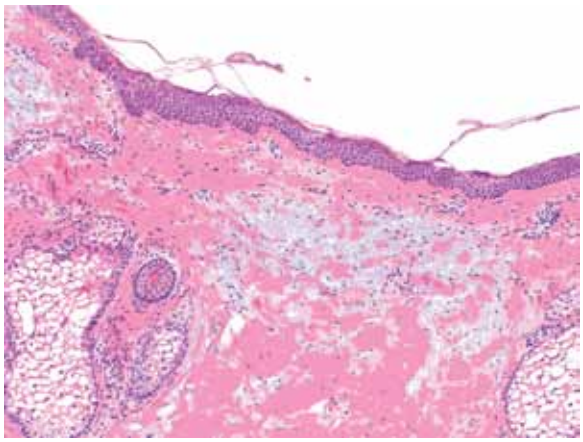


Figure 1. Mohs frozen section histology cryoembedder and Clini-RF

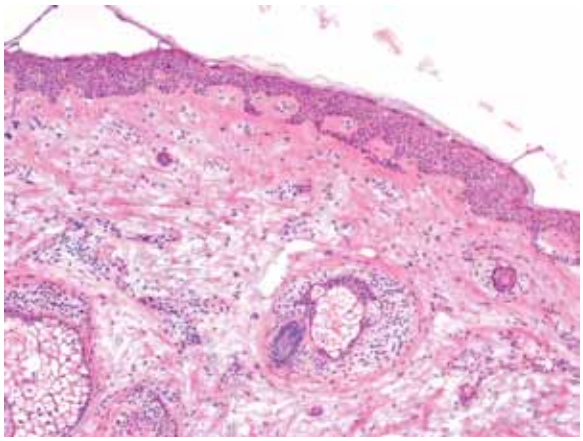


Figure 2. Mohs frozen section histology cryoembedder and cryostat

10:52 – 11:00 am

PRESENTER: John M. Strasswimmer, MD, PhD

TITLE: **DermBase: A Web-based Research Platform Producing a 19,061 Tumor Prospective Mohs Study (and More)**

AUTHORS: John M. Strasswimmer, MD, PhD[1,2]; Murad Alam, MD[3]

INSTITUTIONS: 1. Director, Melanoma & Cutaneous Oncology Program, Lynn Cancer Institute, Boca Raton, FL, United States 2. Biochemistry, Florida Atlantic University, Boca Raton, FL, United States 3. Dermatologic Surgery, Northwestern University, Chicago, IL, United States

PURPOSE: Mohs surgery and dermatology studies suffer from low "N" of patients. We sought to design an online web-based collaborative research system to overcome logistical, IRB, and other issues to create massive prospective studies.

DESIGN: A computer based online system, DermBase, was designed. HIPAA, IRB, financial, ethical, and other issues were addressed collaboratively. Mohs surgeons were invited to propose research topics, which were then collaboratively vetted to produce a research protocol. Subsequently, other proposals for research were invited to be proposed and vetted online

SUMMARY: Invitations were sent to 71 Mohs surgeons in a mix of academic and private practice settings in the United States. A total of 32 enrolled to participate. Date were collected prospectively over a 28 week period. A total of 19,061 tumor-related datasets Outcomes included incidence of rare malignancies, variation in patient safety practices, and rate of treatment-related adverse events. There were no withdrawals of participants from DermBase.

CONCLUSION: DermBase is a real-time collaborative online research platform which is able to facilitate large prospective clinical studies rapidly which are important to the community of Mohs surgeons. This platform is available for the Mohs College members.

DermBase is a collaborative tool for Mohs surgeons.

11:02 – 11:10 am

PRESENTER: Nicole F. Velez, MD

TITLE: **Skin Cancer Outcomes in Patients with Chronic Lymphocytic Leukemia: A 20-year Retrospective Cohort Study**

AUTHORS: Nicole F. Velez, MD[1,2]; Pritesh Karia, MPH[1]; Ye Guo, MSCS[1]; Victor A. Neel, MD, PhD[2]; Chrysalyne D. Schmults, MD[1]

INSTITUTIONS: 1. Dermatology, Brigham and Women's Hospital, Boston, MA, United States 2. Dermatology, Massachusetts General Hospital, Boston, MA, United States

PURPOSE: To describe outcomes of skin cancer in patients with chronic lymphocytic leukemia (CLL).

DESIGN: A retrospective cohort study of patients diagnosed with both CLL and skin cancer was conducted over a 20-year period at 2 tertiary care centers. Medical records including clinic notes, operative notes, and pathology reports were reviewed. Demographics, CLL stage, tumor features, treatment, recurrence and metastases were recorded. Results were tabulated. Multivariate logistic regression analysis of factors potentially associated with skin cancer recurrence and death is underway including age, gender, multiple cancer formation, tumor diameter depth and differentiation, duration of CLL, CLL disease stage, and history of chemotherapy.

SUMMARY: 300 patients met inclusion criteria. A preliminary analysis of a randomly-selected 50 patient subset of this study cohort was performed. This group had a mean follow up of 10 years after CLL diagnosis, and mean age at CLL diagnosis of 64 years. 58% were men. 42% of patients received chemotherapy. 20% had died from CLL by end of follow up. In addition to skin cancer, 30% of patients developed a non-skin secondary malignancy. 10% of subjects developed nodal and distant metastasis from skin **cancer** and 12 % died of disease. Risk of death from melanoma was 22% (4 of 18 melanoma cases) and 4% from invasive SCC (2 of 47 SCC cases).

CONCLUSION: Our preliminary results indicate patients with CLL may have a higher risk of dying from skin cancer than the general skin cancer population from both melanoma, and SCC. A full analysis of the entire 300 person study cohort (the largest to date studying skin cancer outcomes in CLL patients) is underway and will help to define outcomes from skin cancer and other secondary malignancies in CLL patients.

11:12 – 11:20 am

PRESENTER: Craig C. Miller, MD

TITLE: **Adnexal Carcinomas: A Case Series and Comparison of Mohs Micrographic Surgery vs. Wide Local Excision for Local Treatment**

AUTHORS: Craig C. Miller, MD[1]; Preethi R. Raghu; Paul Bogner, MD[3,1]; Nathalie C. Zeitouni, MD[1]

INSTITUTIONS: 1. Dermatology, Roswell Park Cancer Institute, Buffalo, NY, United States 2. School of Medicine, Albany Medical College, Albany, NY, United States 3. Pathology, Roswell Park Cancer Institute, Buffalo, NY, United States

PURPOSE: Adnexal carcinomas (ACs), also known as cutaneous appendageal carcinomas, are rare and aggressive neoplasms derived from the eccrine or the folliculosebaceous-apocrine units of the skin. ACs normally manifest themselves on the head and neck region of middle-aged to older adults. Treatment options depend upon the stage at presentation but initial therapy for localized tumors has traditionally involved either wide local excision (WLE) or Mohs micrographic surgery (MMS). The objective of the present study is to describe the presenting characteristics of these rare cutaneous malignancies and to analyze the efficacy of localized tumor therapies (WLE vs. MMS) in a series of 37 patients presenting with adnexal carcinomas at a tertiary cancer treatment center.

DESIGN: We used the clinical database at a tertiary care cancer center to compile 37 confirmed cases of AC since January 2000. We then looked for associations between patient demographics (age, gender), tumor differentiation/histological subtype, tumor stage, tumor site, and treatment (WLE vs MMS) with outcome measures (local recurrence, metastasis, and overall survival).

SUMMARY: In our study population, eccrine carcinomas were the most prevalent of the cutaneous ACs (73.0%; 13.5% were of sebaceous origin, 8.1% of apocrine origin, and there was one case each of a mixed malignant tumor and a poorly differentiated adnexal carcinoma). The most common specific histological subtypes of tumors were microcystic adnexal carcinoma (18.9%)

and porocarcinoma (13.5%). ACs presented in older adults (average age at presentation 68.6+/-12.1 yrs, range 45-96) with no gender preference. Mean follow-up was 3.9 years. Overall, ACs favored presentation on the head and neck (46.0% vs 32.4% for the trunk, 10.8% each for the lower and upper limbs), however for males the trunk was the most likely site for an AC to present (47.4%) while in females the head and neck was the predominant site (66.7%). 43.2% of patients had a history of prior skin cancer. WLE was the most common initial treatment (51.3%; 40.5% of patients were initially treated by MMS, 2 patients with extra-mammary Paget's disease were treated with topical imiquimod, one patient was treated with XRT). Tumor stage (WHO classification, T1 = tumor < 2 cm, T2 = tumor 2-5 cm, T3 = tumor > 5 cm) did not appear to direct patients preferentially to either of these treatment modalities, however, MMS was more commonly performed on lesions of the face. Evaluation of outcome measures reveals that patients treated by MMS appeared to have a better prognosis with no local recurrences and only one case of metastasis and one death; patients treated by WLE fared worse with one local recurrence and 5 cases of metastasis and 4 deaths. However, the cases in which these patients succumbed to their disease were eventually identified as being secondary cutaneous ACs and these lesions represented early metastasis of a previously unidentified internal malignancy (3 breast CA, one lung CA, and one esophageal CA). The one patient treated by XRT was found to have widespread metastasis arising presumptively from the primary cutaneous AC and he succumbed to his disease. All of the patients who died from their disease, whether associated with a primary or secondary cutaneous AC, had lesions of "eccrine" origin. There was no statistically significant prognostic risk depending upon tumor stage, age, gender or anatomic location.

CONCLUSION: Adnexal carcinomas are rare cutaneous tumors with the potential for metastasis and death. In our decade long experience, tumors having histology consistent with eccrine origin were by far the most common pattern of differentiation with microcystic adnexal carcinomas and porocarcinomas being the most common subtypes. Anatomical distribution and history of prior skin cancers in these patients suggests a relationship between these lesions and sun exposure. Traditional tumor staging based upon the initial clinical presentation of the primary tumor (T1-3) may have little value in predicting outcome. Outcome is almost exclusively linked to identification of an underlying primary internal malignancy and all fatal outcomes were associated with ACs of "eccrine" origin. The risk of an underlying malignancy does not appear to depend upon tumor stage, histological subtype, age, gender or anatomic location. Both MMS and WLE were highly effective at limiting local recurrence (one case of local recurrence out of 34 patients, overall local control rate of 97.0%); there was no significant difference between local control rates for MMS (15/15) and WLE (18/19).

11:22 – 11:30 am

PRESENTER: Ashley Wysong, MD, MS

TITLE: **Is Metastatic Basal Cell Carcinoma on the Rise?: A Systematic Review from 1981-2011**

AUTHORS: Ashley Wysong, MD, MS[1]; Sumaira Z. Aasi, MD[1]; Jean Y. Tang, MD, PhD[1]

INSTITUTION: 1. Department of Dermatology, Stanford University, Stanford, CA, United States

PURPOSE: Metastatic BCC (mBCC) is rare with an estimated incidence of 0.0028% to 0.55%. A review was published by Domarus et al. (JAAD 1984) highlighting 170 cases of mBCC from 1894 to 1980, however, no systematic review has been performed in the last 30 years.

DESIGN: An extensive literature search was performed for all cases of mBCC from 1981-2011. A total of 236 cases were identified with 43 cases excluded (21 not in English, 5 in BCNS, 4 published elsewhere, 9 did not meet mBCC criteria) for a total of 193 cases. Two-sided X2 tests were performed to calculate differences of proportion.

SUMMARY: The M:F ratio of mBCC patients was 2.5:1 (72% male) in 1981-2011. The majority of cases were reported in Caucasians, however 6, 5, and 3 cases were observed in Asian, Black, and Hispanic individuals, respectively. The average age of onset of the primary tumor in our review was 52 years (median 50 years), which was increased by 5 years over the median age of 45 years reported by Domarus.

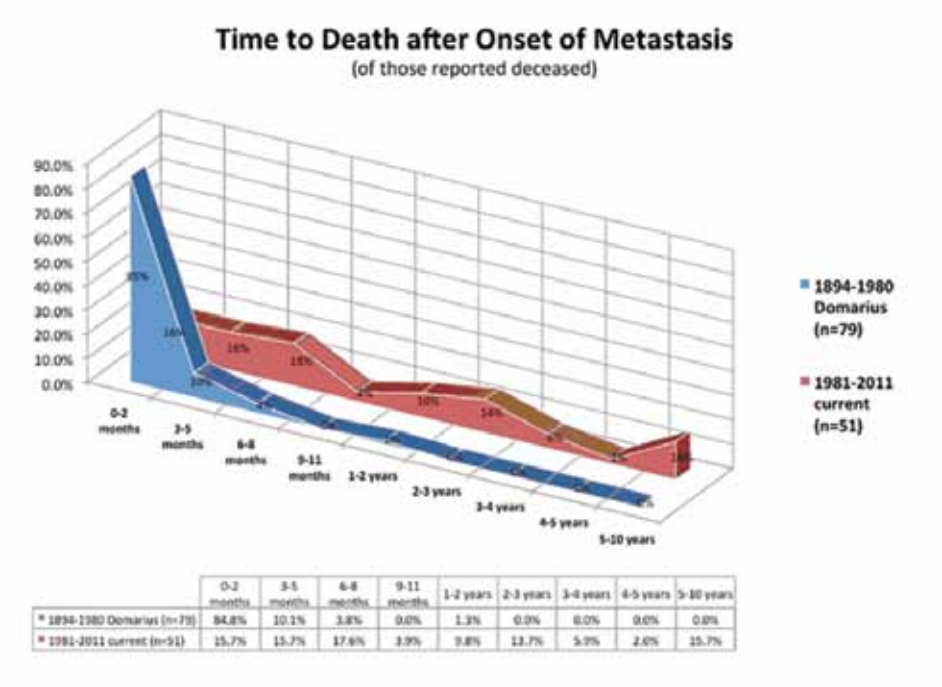
The average size of primary tumors was 7.5 cm in the largest dimension, with a range of 0.5 - 40 cm. The locations for the primary BCC tumors were similar over time with the most common site being head and neck (64%), followed by the trunk (21%), and extremities (5%). In cases on the head and neck, there was a significant increase in the percentage coming from the scalp (26% vs. 11% reported by Domarus, p=0.01). Of note, there were 8 mBCC cases reported in 1981-2011 from the genitalia (5 vulva, 3 scrotum).

Nodal metastases were seen in 51% of cases, which was significantly increased over the 40% observed by Domarus (p=0.01). The other common sites of metastases in this series included the lungs (34%), bone (21%), skin/soft tissues (11%), and the liver (4%).

The average interval between the onset of the primary tumor and metastasis was 9.6 years. Despite metastasis, the majority of cases were reported living at the time of publication (74%). Of those reported deceased (26%), the average survival was 1.97 years. In contrast, Domarus reported a median survival of 8 months, with 85% deceased within the first 3 months (Figure 1). From 1981-2011, 50% of those reported deceased lived longer than 1 year after diagnosis of metastases, while 15% survived 5-10 years. In addition, 25% of those who lived less than 1 year had metastases on initial presentation with an average neglect of treatment for the primary tumor of 15 years (range 3-24 years).

Eighty cases reported the use of adjuvant therapy: radiation (54%), chemotherapy (28%), and radiation + chemotherapy (18%). The most commonly reported regimens included the use of cisplatin, bleomycin, 5-FU, and carboplatin. There was no difference in the proportion of patients reported alive at time of publication with adjuvant therapy. However, of those reported deceased, individuals who received adjuvant therapy lived 5 months longer (26.5 vs. 21.5 months); clinically though not statistically significant.

CONCLUSION: We report a total of 193 cases of mBCC in the literature from 1981-2011 for an updated total of 363 cases from 1894-2011. This number is likely an underestimate of global mBCC as only reported cases were included. There appears to be an increase in the number of cases of mBCC with an average of 6.4 cases/year in the last 30 years compared to 2 cases/year from 1894-1980. This may be due to publication or reporting bias, however, the rise in mBCC parallels the increasing incidence of sporadic BCC and is concerning in the era of high cure rates with Mohs micrographic surgery. Finally, we saw a positive shift in the survival of patients with mBCC with a higher proportion surviving at the time of publication and a longer observed survival time. There was a trend toward increased survival with adjuvant therapy that will likely continue to improve with the development of novel Hedgehog inhibitors and other new targeted therapies. Further population-based studies are needed to delineate the risk factors for progression to mBCC and to identify a subset of patients in need of increased surveillance and adjuvant therapies.



	0-2 months	3-5 months	6-8 months	9-11 months	1-2 years	2-3 years	3-4 years	4-5 years	5-10 years
* 1894-1980 Domarius (n=79)	84.8%	10.1%	3.8%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%
* 1981-2011 current (n=51)	15.7%	15.7%	17.6%	3.9%	9.8%	13.7%	5.9%	2.0%	15.7%

Reconstruction Pearls Abstract Session – Thursday, May 3: 11:30 am – 12:15 pm

11:34 – 11:40 am

PRESENTER: Joseph K. Francis, MD

TITLE: Myocutaneous Island Pedicle Flaps of the Upper Eyelid

AUTHORS: Joseph K. Francis, MD[1,2]; Richard G. Bennett, MD[1,2]

INSTITUTIONS: 1. Dermatology, Keck School of Medicine at USC, Los Angeles, CA, United States 2. Medicine (Dermatology), David Geffen School of Medicine at UCLA, Los Angeles, CA, United States

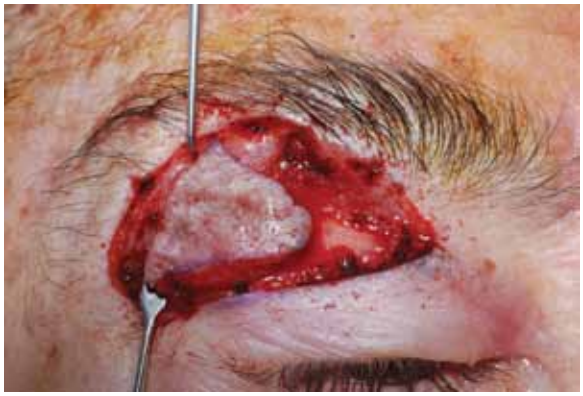
PURPOSE: The myocutaneous island pedicle flap on the upper eyelid is not well described in the literature. This flap can be very useful in this anatomic location.

DESIGN: We present a case series of 5 patients with tumors on the upper eyelid treated with Mohs surgery. Wounds on these five patients were closed using island pedicles flaps on the upper eyelid either alone or with other flaps. The subcutaneous island pedicle flap is based on the concept of underlying loose subcutaneous tissue, usually fatty, enhancing flap movement. On the upper eyelid such underlying subcutaneous tissue is absent. However, the orbicularis oculi muscle that attaches to overlying skin has a rich blood supply. Thus a myocutaneous island pedicle flap based on underlying muscle can be created in this location and it moves easily. We have found that myocutaneous island pedicle flaps in this location are best created so that the flap moves in the horizontal rather than vertical direction.

SUMMARY: All 5 patients in this case series were evaluated at 1 week 1 month and 1 year post operatively. Patients all had excellent cosmetic results with no ectropion.

CONCLUSION: The myocutaneous island pedicle flap is useful for closure of upper eyelid defects.

Myocutaneous island pedicle flap designed and cut to close defect on right lateral upper eyelid.



Myocutaneous island pedicle flap horizontally advanced to close defect on right lateral upper eyelid.

11:41 – 11:47 am

PRESENTER: Matthew J. Mahlberg, MD

TITLE: A New Spin on the Spiral Flap: Experience with Sixty-three Patients

AUTHORS: Matthew J. Mahlberg, MD[1,2]; Brian C. Leach, MD[2]; Joel Cook, MD[2]

INSTITUTIONS: 1. Dermatology Associates of Colorado, Englewood, CO, United States 2. Department of Dermatology and Dermatologic Surgery, Medical University of South Carolina, Charleston, SC, United States

PURPOSE: The topographic contours of the lower nasal third are unique and present challenges in surgical reconstruction. In particular, the preservation or recreation of the reflective convexity of the ala and the adjacent shadowed concavity of the alar groove is essential. Numerous reconstructive options are available for resurfacing this region of the nose after tumor extirpation. However, many of the available options provide tissue coverage at the expense of native topography. The inherent curvilinear design of a spiral flap lends itself well to recreating this native topographic form. Several spiral flaps have been described in the literature. In this presentation, we will describe appropriate patient selection as well as the design and execution of a logarithmic spiral flap for reconstruction of distal nasal surgical defects following Mohs micrographic surgery. Particular emphasis will be given to understanding the geometric variations of the spiral shape and the influence of this variation on reconstructive results.

DESIGN: A retrospective analysis was performed of all spiral flaps performed over a five-year period. Clinical documentation and photographs were reviewed to assess results. Intraoperative step-by-step photographs were taken to illustrate the operative procedure.

SUMMARY: Sixty-three patients on whom the spiral flap was performed were identified over a five-year period. The flap was used to successfully reconstruct alar defects ranging in size from 5mm to 15mm in diameter. No persistent complications were noted.

CONCLUSION: When properly designed and executed, the spiral flap is a reliable, reproducible, single-stage, local flap that can serve as a workhorse for common alar defects following Mohs micrographic surgery.

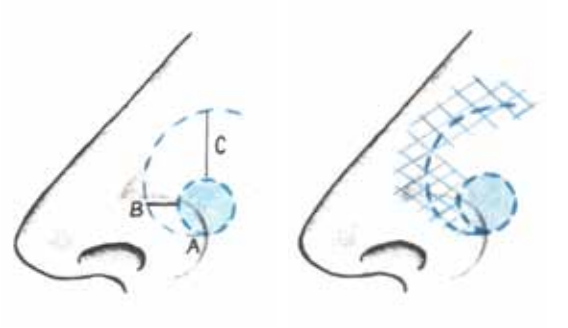


Figure 1. Spiral Flap Design; Area Undermined in Execution of the Spiral Flap

Figure 2. Surgical defect at alar groove repaired with spiral flap and three-month follow-up demonstrating excellent recontour of alar topography.

11:48 – 11:54 am

PRESENTER: Jamie L. McGinness, MD

TITLE: **Prolonging the Primary Pivoting Point: Mathematical Effect of Prolonging the Primary Burow's Triangle on Trilobed Transposition Flap Rotation**

AUTHORS: Jamie L. McGinness, MD[1]; Tri H. Nguyen, MD[1]

INSTITUTION: 1. Dermatology, Northwest Diagnostic Clinic, Houston, TX, United States

PURPOSE: The effect of lengthening the primary Burow's triangle and its effects on the total angle of rotation for a bilobed transposition flap (BLTF) was previously evaluated at the ACMS 2010 meeting. The purpose of this study was to evaluate lengthening of the primary Burow's triangle and its effect on the total angle of rotation for a trilobed transposition flap (TLTF).

DESIGN: Utilizing a TLTF design with primary, secondary, and tertiary lobes equal in size to the wound defect size and AutoCad (engineering design software); the length of the primary Burow's triangle was progressively lengthened to evaluate how the total angle of rotation of the TLTF changes.

SUMMARY: It was found that an inverse relationship exists with the total angle of rotation and the lengthening of the primary Burow's triangle. As the Burow's triangle is lengthened the total angle of rotation decreases (Figure 1). The formula Sin (angle of rotation/6) = radius of the defect/(radius of the defect + length of the Burow's triangle) can be used to calculate the Burow's triangle length for a given angle of rotation when using sizes for the primary, secondary, and tertiary lobes equal to the size of the wound defect. Furthermore, if the angle of total rotation of the TLTF is 135o (45o between each lobe) then the length of the primary Burow's triangle is equal to 1.6131259 multiplied by the radius of the wound defect. Table 1 further describes the relationship of the different lengths of the primary Burow's triangle and the total angle of rotation.

CONCLUSION: The TLTF is a useful reconstructive option for defects on the distal nose.1 Albertini and Hansen described designing the Burow's triangle 1 to 1.5 times the defect diameter.1 The TLTF is commonly used for distal nasal defects in order to recruit more proximal nasal skin and allow for a more vertical tertiary lobe decreasing the possibility of alar distortion. The TLTF is especially useful for distal nasal defects when an oblique secondary lobe occurs with the use of a BLTF. The primary Burow's triangle length and the total angle of rotation of the TLTF needed will be dependent on the defect location. For example, the more distal the location of a wound defect on the nose the longer the primary Burow's triangle needed to achieve the larger the angle of rotation required for a more vertical orientation of the tertiary lobe. It should also be noted that the shorter the primary Burow's triangle and the larger the total angle of rotation the higher the pivotal restraint of the flap.

As a result, lengthening of the primary Burow's triangle in a TLTF will decrease the total angle of flap rotation and pivotal restraint.

Reconstruction Pearls Abstract Session — Thursday, May 3: 11:30 am – 12:15 pm

Furthermore, changes in the primary Burow's triangle length can be used to manipulate the exact orientation of the tertiary lobe to obtain a more vertical orientation helping decrease the possibility of alar distortion.

1. Dermatol Surg 2010;36:1726–1735.

Table 1.

Burow's triangle length (pivot point) measured from the defect edge	Total degree of rotation (primiary, secondary, and tertiary lobe equal to defect size
Radius	180
60% diameter or 120% of radius	162.21415
70% diameter or 140% of radius	147.74591
80% diameter or 160% of radius	135.71919
90% diameter or 180% of radius	125.54899
Diameter	116.82732
1.5 diameter	86.86507
1.6131259 radius	135

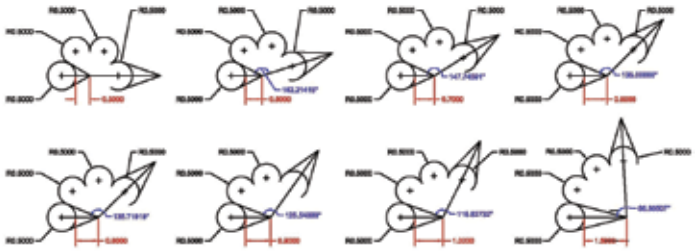


Figure 1.

11:55 am – 12:01 pm

PRESENTER: Rupert B. Barry, MB, BCh, BAO

TITLE: **The Use of an Orbicularis Oris Hinge Flap to Recreate Volume and the Convex Contour of a Deep Lower Lip Vermilion Defect**

AUTHOR: Rupert B. Barry, MB, BCh, BAO[1]
INSTITUTION: 1. Dermatology Surgical Unit, Royal Victoria Infirmary, Newcastle upon Tyne, United Kingdom

PURPOSE: Excision of a large, lower lip squamous cell carcinoma may result in a deep surgical defect with significant loss of orbicularis oris muscle. A lip wedge repair may be utilized though it may result in microstomia. An alternative cosmetic subunit approach to such complex, deep mucocutaneous lower lip defects is to utilize an island pedicle flap to close the cutaneous portion of the wound and a labial mucosal advancement to close the mucosal portion. However, there is frequently a persistent step-off deformity due to missing underlying muscle. A muscular hinge flap, harvested from the residual, adjacent orbicularis oris muscle may be used to restore both volume and contour to the lower lip vermilion. In addition, there is preservation of sphincter function as well as maintenance of oral aperture width.

DESIGN: Two similar cases are described to illustrate the technique and its advantages. Both cases were solid organ transplant recipients who had complete excision of an aggressive squamous cell carcinoma from the lower lip by frozen tissue Mohs micrographic technique. The defects were complex defects involving both the vermilion and cutaneous lower lip. There was significant resection of orbicularis oris in both cases. Both patients had similar reconstruction (an island pedicle flap to repair the cutaneous portion and a labial mucosal advancement to repair the mucosal defect). The first patient (hinge flap not used) had a persistent step-off contour deformity which was evident when his mouth was open. Oral sphincter function was preserved. In the second patient, a muscular hinge flap, based on the adjacent intact orbicularis oris, was developed. It is important to preserve a vascular pedicle equal to (at least) twenty-five per cent of the total hinge flap length in order to ensure flap viability. The flap is loosely secured to the base of the defect with a 6-0 rapidly absorbable polyglactin 910 polyfilament suture. The repair was completed by a labial mucosal advancement flap. Lower lip volume and contour was successfully recreated.

SUMMARY: The benefits of the incorporation of a muscular hinge flap in the repair of a deep surgical defect of the lower lip are presented. Clinical cases highlight the technique and the cosmetic advantages to be gained from such a reconstruction. This is a relatively straightforward technique which can optimize the aesthetic repair of complex lower lip wounds.

CONCLUSION: A muscular orbicularis oris hinge flap may be used to successfully recreate both volume and contour in deep, complex, lower lip vermilion defects.

Orbicularis oris hinge flap

Reconstruction Pearls Abstract Session – Thursday, May 3: 11:30 am – 12:15 pm

12:02 – 12:08 pm

PRESENTER: Richard G. Bennett, MD

TITLE: Z-plasty for Correction of Nasofacial Webbing

AUTHORS: Joseph K. Francis, MD[1,2]; Richard G. Bennett, MD[1,2]

INSTITUTIONS: 1. Dermatology, Keck School of Medicine at USC, Los Angeles, CA, United States 2. Medicine (Dermatology), David Geffen School of Medicine at UCLA, Los Angeles, CA, United States

PURPOSE: To demonstrate how to design a Z-plasty to correct webbing/tenting in the apical lip triangle between the nose and cheek.

DESIGN: A Z-plasty is a technique to lengthen and redirect scars; it is often used to efface webbing across concavities. Occasionally, webbing occurs which obliterates the apical lip triangle between the cheek and nose especially after cheek to nose transposition flaps. To correct this tenting a Z-plasty is performed whereby a triangle of cheek tissue is cut and interpolated medially into the tented area (Figure 1). We present two examples of this technique. Patient 1 had a cheek transposition flap which resulted in nasofacial webbing. Patient 2 had an island pedicle flap to close a defect in the apical lip triangle which resulted in nasofacial tenting (Figure 2). Both cases were revised after patients were unhappy with their cosmetic appearance.

SUMMARY: The Z-plasties performed effaced the tenting in the apical triangle of the upper lip.

CONCLUSION: Z-plasty is a useful flap technique to correct webbing or tenting across the upper lip apical triangle concavity between the cheek and nose.

Figure 1. Z-plasty cut (left) and moved into place (right). Note that cheek tissue is moved medially and inferiorly to fill in the excised tented area.

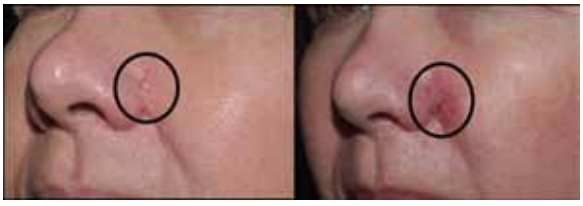


Figure 2. Before (left) and after (right) z-plasty. Note release of tenting and softened appearance of melolabial cheek fold.

12:09 – 12:15 pm

PRESENTER: Kenny J. Omlin, MD

TITLE: The Utility of the Pursestring Pulley Combination Stitch for the Repair of a Wide Variety of Nasal Defects Following Mohs Surgery

AUTHOR: Kenny J. Omlin, MD[1,2]

INSTITUTIONS: 1. Dermatology, University of California, Davis, Sacramento, CA, United States 2. Mohs Surgery, Kaiser Permanente, Napa, CA, United States

PURPOSE: The nose is the most common cosmetic unit on the face requiring Mohs surgery for the effective removal of non-melanoma skin cancers. The unique topography of the nose, combined with the characteristic tissue types of the various subunits can pose a significant challenge to the reconstructive surgeon. Subtle alterations in structure and form may lead to displeasing aesthetic outcomes as well as impaired nasal airflow. Repair techniques described in the literature include secondary intention, primary closure, full-thickness skin grafts, and a variety of flaps. We describe a novel technique utilizing a combination of an intradermal pursestring suture combined with an overlying pulley stitch for the repair of a wide variety of nasal defects.

DESIGN: 24 patients underwent Mohs surgery for removal of either squamous cell carcinoma or basal cell carcinoma involving the nose. Defect sites included all nasal subunits, as well as, junctional points, such as the alarfacial groove and nasofacial sulcus. Defect size ranged between 0.4 cm x 0.3 cm to 1.7 cm x 1.5 cm. Immediate repair was performed in all cases utilizing the pursestring pulley combination suture technique. After meticulously undermining the surgical defect, an intradermal absorbable pursestring suture was placed. Subsequently, a single cutaneous, non-absorbable pulley suture was placed in such a fashion as to achieve minimal free margin distortion. The cutaneous suture was removed at one week. Patients were evaluated at one week, one month, and two months.

SUMMARY: After one month, all patients achieved excellent functional and aesthetic outcomes (Figure 1 and Figure 2).

CONCLUSION: The pursestring pulley combination stitch provides an excellent repair option for nasal defects following Mohs surgery. The centralized vector forces created by the pursestring stitch results in a significant decrease in the size of the primary defect. The strategic placement of the cutaneous pulley stitch not only closes the defect completely but also orients the vector forces to avoid free margin distortion. The combination of excellent aesthetic outcomes, minimal operative time, technical ease, and minimal patient morbidity make the pursestring pulley repair a valuable addition to the armamentarium of the reconstructive surgeon.

Reconstruction Pearls Abstract Session – Thursday, May 3: 11:30 am – 12:15 pm

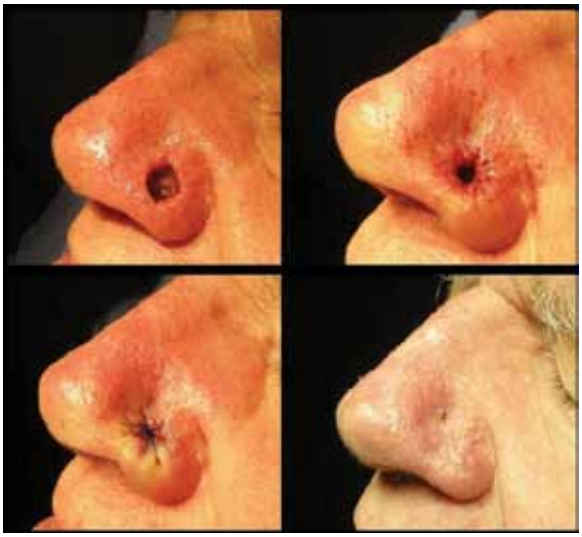


Figure 1. Left alar defect, pursestring in-place, pulley in-place, 1 month post-op

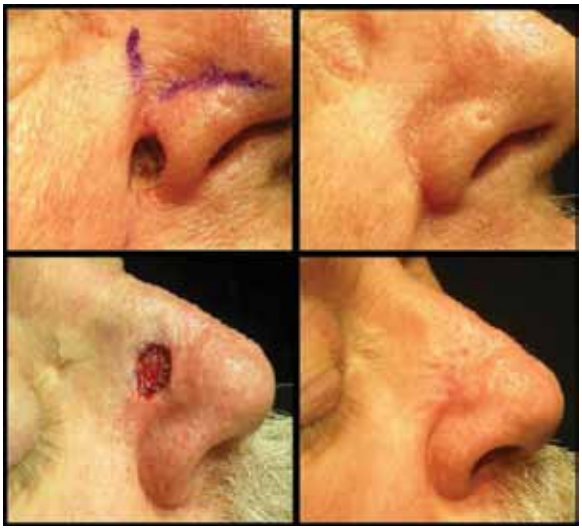


Figure 2. Top Row: Alarfacial Groove (Defect, 1 mo. result); Bottom Row: Nasal Sidewall (Defect, 1 mo. result)

3:34 – 3:42 pm

PRESENTER: Michael Campoli, MD, PhD

TITLE: **Assessment of the Clinical and Pathologic Characteristics of Perineural Invasion in Patients with Cutaneous Squamous Cell Carcinoma**

AUTHORS: Michael Campoli, MD, PhD[1,2]; David G. Brodland, MD[2]; John A. Zitelli, MD[2]

INSTITUTIONS: 1. Fairview Medial Group, Wyoming, MN, United States 2. Zitelli and Brodland P.C., Pittsburgh, PA, United States

PURPOSE: Background: Much of the available information regarding the incidence as well as clinical significance of perineural invasion (PNI) in cutaneous squamous cell carcinoma (CSCC) has been obtained from retrospective studies that have failed to present a unified definition of PNI, have utilized conventional techniques to evaluate histopathology and have not taken into account heterogeneity of the patient populations investigated as well as histopathological characteristics of the lesions analyzed.

Purpose: To more appropriately characterize the biological and clinical significance of PNI in CSCC and to determine the usefulness of documenting PNI in histologic specimens of CSCC as a marker to improve the precision of the prognostic assessment of patients.

DESIGN: A multicenter prospective analysis of the clinical and pathological characteristics of patients undergoing Mohs surgery for CSCC within four academic and eleven private practice Mohs micrographic surgery sites over twenty five working days was performed. Patients were separated by PNI status and variables were compared between categories using independent t-tests or chi-square tests, as appropriate. All continuous variables were checked for normality and type I error rate was set at α=0.05.

SUMMARY: The results of the analysis of 753 CSCC from 645 patients are summarized in Table 1.

CONCLUSION: The incidence of PNI was found to be 3.9%. PNI was not found to be associated with patient age, gender, referral status (whether the patient was referred by an outside physician) or the type of treatment center, i.e. academic versus private practice setting. The presence of PNI was significantly correlated with preoperative tumor size, recurrent, previously treated and symptomatic tumors as well as the presence of lymphadenopathy. Furthermore, PNI was significantly associated with histologic variables such as degree of tumor differentiation, tumor thickness, tumors > 6mm and Clarks level > V. From a clinical standpoint, PNI was significantly correlated with the number of Mohs layers and maximum margin required to clear the tumor. To the best of our knowledge the present study is the first prospective multicenter study to address the clinical relevance of PNI in CSCC through a comprehensive analysis of the clinical and pathological characteristics of patients undergoing Mohs surgery. The association of PNI with clinicopathological indicators of poor prognosis such as lymphadenopathy, tumor thickness, tumor differentiation and maximum margin required to clear the tumor, argues for a potential role of PNI in the clinical course of CSCC and suggests that documenting PNI in histologic specimens of CSCC may serve as a marker to improve the precision of the prognostic assessment of patients. Follow-up studies are currently in progress to determine the whether PNI in CSCC is associated with the clinical course of the disease.

Table 1. Summary of Clinical and Pathologic Characteristics of Patients with Cutaneous Squamous Cell Carcinoma

	PNI (n=35)	No PNI (n=718)	P value
Age	78.4 ± 11.9	74.4 ± 11.0	0.056
Gender			
Male	26 (74%)	517 (72%)	
Female	9 (26%)	201 (28%)	0.769
Preoperative Area	4.0 [1.2, 14.0]	1.0 [0.5, 2.1]	<0.001
Referred	26 (74%)	520 (72%)	0.810
Specific Location			
Ear	3 (9%)	76 (11%)	
Eyelid	1 (3%)	12 (2%)	
Face	17 (49%)	220 (31%)	
Foot	0	3 (<1%)	
Hand	0	45 (6%)	
Lip	0	31 (4%)	
Lower Ext	0	82 (11%)	
Neck	1 (3%)	19 (3%)	
Nose	2 (6%)	50 (7%)	
Scalp	7 (20%)	105 (15%)	
Trunk	2 (6%)	30 (4%)	
Upper Ext	2 (6%)	45 (6%)	0.321
General Location			
Ext	2 (6%)	175 (24%)	
Head and Neck	31 (89%)	513 (71%)	
Trunk	2 (6%)	30 (4%)	0.039
Tumor type			
Primary	21 (60%)	608 (85%)	
Recurrent	13 (37%)	110 (15%)	
Primary/Recurrent	1 (3%)	0	<0.001
Lymphadenopathy	2 (6%)	7 (1%)	0.012
Symptoms	25 (71%)	304 (42%)	0.001
Previous Treatment	14 (40%)	120 (17%)	<0.001
Risk Factors	11 (31%)	99 (14%)	0.004
Differentiation			
Poorly	13 (37%)	16 (2%)	
Well	22 (63%)	702 (98%)	<0.001
Clarks>V	23 (66%)	43 (6%)	<0.001
Thickness, mm	6.4 ± 3.8	2.5 ± 2.3	<0.001
Thickness			
<6mm	17 (49%)	624 (91%)	
≥6mm	18 (51%)	63 (9%)	<0.001
Invasion>Fat	23 (66%)	35 (5%)	<0.001
Postoperative Area[1]	14.0 [3.5, 27.0]	2.3 [1.3, 4.8]	<0.001
Mean # of Layers	2.7 ± 1.7	1.4 ± 0.7	<0.001
Layers			
1	5 (14%)	503 (70%)	
2	16 (46%)	163 (23%)	
3	6 (17%)	42 (6%)	
4	5 (14%)	7 (1%)	
5	1 (3%)	2 (<1%)	
6	1 (3%)	1 (<1%)	
10	1 (3%)	0	<0.001
Maximum margin (mm)	8.1 ± 6.6	2.9 ± 2.2	<0.001
Setting			
Private practice	14 (48%)	373 (52%)	
University	15 (52%)	345 (48%)	0.698

Data are expressed as mean ± SD or n (%) unless otherwise specified
[1] Data were not normally distributed, presented as median [IQR] and tested across groups using a Mann-Whitney test

3:42 – 3:50 pm

PRESENTER: Kevin W. O'Bryan, MD

TITLE: **An Evolving Paradigm for the Workup and Management of Very High Risk Cutaneous Squamous Cell Carcinoma**

AUTHORS: Kevin W. O'Bryan, MD[1]; Désirée Ratner, MD[1]

INSTITUTION: 1. Dermatology, Columbia University Medical Center, New York, NY, United States

PURPOSE: The purpose of this study is to establish a protocol for the workup and management of very high-risk cutaneous squamous cell carcinoma (VCSCC). Low and moderate risk cutaneous squamous cell carcinoma (CSCC) can be managed effectively with conservative measures. However, VCSCCs display more aggressive behavior, with a propensity for extensive local invasion and metastasis. Importantly, they often have a greater number of high-risk features on initial presentation. Identifying VCSCC early, and treating these patients with more aggressive intervention, can decrease their morbidity and mortality.

Tromovitch Award Abstract Session — Thursday, May 3: 3:30 – 4:30 pm

The current standard of care for patients who cannot be cured by surgery alone is adjuvant radiation, chemotherapy, or combination therapy, which are given for perineural involvement, bony invasion, satellitosis, in-transit metastasis, or regional or distant metastasis. Few studies have rigorously analyzed the effectiveness of adjuvant therapies in managing VCSCC, and experience with squamous cell carcinoma of the head and neck (HNSCC) has shown them to have low cure rates and high morbidity. As a result, there is great interest in using targeted molecular inhibitors such as the epidermal growth factor (EGFR) receptor inhibitor cetuximab to treat metastatic or unresectable VCSCC.

Cetuximab is a human-murine chimeric monoclonal antibody against EGFR which has shown promise in treating locally advanced, recurrent, or metastatic HNSCC. An increasing number of studies and case reports have shown its benefit in treating metastatic or unresectable CSCC. No randomized, controlled trials have compared the use of cetuximab with the established standard of care in patients with VCSCC. We have analyzed our clinical experience with this intervention at our institution, to assess the benefits of cetuximab monotherapy for VCSCC, as well as the effectiveness of early VCSCC identification and management.

DESIGN: This retrospective chart review compares VCSCC patients who received aggressive early intervention with those who did not. High risk cutaneous squamous cell carcinoma (HCSCC) was defined as a tumor with three or more high risk features on initial clinical and histologic evaluation, including: location on the head and neck, size > 2.0 cm, poor differentiation, recurrence, occurrence in a previously radiated field, and immunosuppression. The subset of SCC qualifying as VCSCC included tumors displaying perineural, parotid, periorbital, cartilaginous, or bony invasion, in-transit metastasis, or regional or distant metastasis.

Once a tumor was classified as HCSCC or VCSCC, patients were divided into six groups: HCSCC treated with surgery alone, HCSCC treated with surgery and standard adjuvant chemotherapy and/or radiation, VCSCC treated with surgery alone, VCSCC treated with surgery and standard adjuvant chemotherapy and/or radiation, VCSCC treated with adjuvant cetuximab, and VCSCC treated with adjuvant cetuximab and radiation. The outcomes of patients in these groups were compared to determine whether VCSCC patients treated with early intervention and adjuvant cetuximab had better outcomes.

SUMMARY: A chart review from 2000 through 2011 was performed. A total of 25 cases of HCSCC and VCSCC were identified. The shortest period of follow-up was nine months, with medians of 1.5 years, 1 year, and 3 years for all patients, non-responders, and responders respectively (range 0.5 to 5 years). Four patients with HCSCC were treated with surgery alone, with a 100% response rate. One patient with HCSCC was treated with surgery and adjuvant radiotherapy with a complete response. Four patients with VCSCC were treated with surgery alone, with 3/4 (75%) of patients suffering from disease progression within one year. Eleven patients with VCSCC were treated with surgery and chemotherapy or radiation (or combination). Four (36.4%) had a complete response, and seven (64%) suffered from disease progression within one year, and ultimately died of their disease. Six patients with VCSCC were treated with adjuvant cetuximab. Three patients (50%) showed complete response, two (40%) showed disease progression, and one could not be assessed due to inability to tolerate the infusions (17%). One patient with VCSCC was treated with cetuximab and radiation, and shows no evidence of disease progression at two years follow-up.

CONCLUSION: This retrospective review of HCSCC and VCSCC patients suggests that a specific set of tumors benefit from early and aggressive intervention. VCSCC patients treated early in their disease course with the targeted molecular inhibitor cetuximab show a small but improved response rate to treatment. With the exception of one case, cetuximab was well tolerated in our patient population, and those patients were spared the morbidity of radiation and platin-based chemotherapy. Though our study is small in size and retrospective, this evidence has helped to shape our treatment paradigm for HCSCC and VCSCC.

3:50 – 3:58 pm

PRESENTER: Luciano J. Iorizzo, III, MD

TITLE: **The Importance of Vertical Pathology of the Debulking Specimen during Mohs Micrographic Surgery for Lentigo Maligna/Melanoma In Situ**

AUTHORS: Luciano J. Iorizzo, III, MD[1]; Isaac M. Chocron, MD[1]; Wilfred A. Lumbang, MD[1]; Thomas Stasko, MD[1]

INSTITUTION: 1. Medicine, Division of Dermatology, Vanderbilt University Medical Center, Nashville, TN, United States

PURPOSE: Mohs micrographic surgery (MMS) is frequently utilized in the treatment of lentigo maligna/melanoma in situ (LM/MIS) and thin melanomas. The horizontal frozen sections prepared for margin examination during MMS do not allow for examination of the Breslow depth of tumor invasion. Many Mohs surgeons send a full-thickness central debulking specimen for permanent histologic evaluation to ascertain an accurate Breslow measurement of the tumor for staging purposes. Previous studies have shown a discrepancy between the Breslow depth reported on biopsy specimens and the depth seen at excision. The primary purpose of this study was to examine LM/MIS cases and cases of thin melanomas that were treated via MMS to ascertain the number and circumstances of cases which were upstaged (TNM and AJCC classifications) on the basis of the examination of vertical sections from a full-thickness debulking. We contend that sending this central specimen for permanent histology is vital because the original biopsy is not always an accurate representation of the entire specimen.

DESIGN: We applied with our institutional IRB and received exempt status. A single center retrospective study was performed examining all cases of LM/MIS and thin melanomas that were treated with MMS from January 1, 2004 – September 30, 2011 in patients

over the age of 18. We included all cases for which a permanent pathology report on the central debulking specimen was available. The primary goal was to determine the number of cases in which the Breslow depth was altered because of the examination of the debulking specimen and utilizing the 2009 (implemented in 2010) 7th edition AJCC staging and TNM staging, the percentage of cases that were upstaged. We also evaluated sex, age, preoperative tumor size, postoperative size, history of non-melanoma skin cancer, and history of melanoma to examine possible differences in the characteristics between the cases which were upstaged and those that were not. We performed a Wilson 2-sided 0.95 confidence interval when analyzing the percentage of cases that were upstaged. When comparing age, preoperative tumor size and postoperative tumor size between tumors that were upstaged and tumors that were not upstaged for significance, we used a Wilcoxon test while we used a Pearson test when examining significance for sex, location, and history of non-melanoma skin cancer or melanoma.

SUMMARY: We identified 197 cases of LM/MIS or thin melanomas in 192 patients during the specified time period that were treated with MMS. Of those cases, 173 had permanent section pathology reports available for the central debulking specimen. We identified 14 cases (8.1%; 95% confidence interval 4.9-13.1%) in which the tumor was upstaged to a more aggressive melanoma based on 7th edition, TNM and AJCC criteria. All of the cases were upstaged based on an increase in Breslow depth rather than mitotic rate or ulceration. Thirteen of the cases which were initially diagnosed as melanoma in situ were now diagnosed as invasive melanoma and 1 initially thin melanoma (0.6 mm) showed a depth greater than 1 mm (1.2 mm). There were 11 cases upstaged from TNM stage TIS to T1A, 2 from TIS to T2A, and 1 from T1A to T2A. Using the 7th edition AJCC classification, 11 cases were upstaged from stage 0 to 1A, 2 from 0 to 1B, and 1 from 1A to 1B. In all, the debulking in 4 cases revealed a Breslow depth of 1 mm or greater. In those circumstances, variation in therapy, including a possible sentinel lymph node biopsy might have been considered. There were no significant differences in the age (median age 67 for both groups, P:0.64), sex (79% male upstaged vs. 75% male not upstaged, P:0.76), tumor location (P:0.12), preoperative tumor size, postoperative tumor size, history of non-melanoma skin cancer (P:0.24), and history of melanoma (P:0.53) between tumors that were upstaged and those that were not.

CONCLUSION: The data demonstrates that the initial biopsy of a pigmented lesion may not always be an accurate representation of the actual Breslow depth of the lesion. In 8.1% of cases, the melanoma was upstaged when the Mohs debulking section was sent for permanent histologic section. Furthermore, there were no differences when comparing patients in which tumors were upstaged versus those that were not, making the sending of selective debulking specimens for permanent sections impractical. This analysis emphasizes that when performing MMS for LM/MIS or melanoma, the processing of the central debulking specimen for vertical section histology is an integral part of the procedure.

3:58 – 4:06 pm

PRESENTER: Omar A. Ibrahimi, MD, PhD

TITLE: Perceptions of Expertise in Cutaneous Oncologic Surgery: What the Lay Public and Primary Care Physicians Think

AUTHORS: Omar A. Ibrahimi, MD, PhD[1,2]; April W. Armstong, MD, MPH[3]; Haider K. Bangash[4]; Lawrence J. Green, MD[5]; Murad Alam, MD[6]; Daniel B. Eisen, MD[3]

INSTITUTIONS: 1. Dermatology, UConn Health Center, Farmington, CT, United States 2. Wellman Center for Photomedicine, Harvard Medical School, Boston, MA, United States 3. Dermatology, UC Davis, Sacramento, CA, United States 4. Aga Kahn University Medical College, Karachi, Pakistan 5. Private Practice, Rockville, MD, United States 6. Dermatology, Northwestern University, Chicago, IL, United States

PURPOSE: It is unclear what the general public and primary care physicians' perceptions are regarding expertise in cutaneous surgery.

DESIGN: A survey was administered to the lay public and to physicians in primary care medicine residency programs in the United States. Respondents were asked to select the healthcare provider most qualified to perform a variety of cutaneous procedures. Basic demographic information was also collected from both lay public and primary care physician (PCP) survey respondents for statistical analysis.

SUMMARY: Of 354 lay public survey respondents, dermatologists were identified as the preferred provider to see and evaluate a worrisome lesion on the face (70%), have a skin cancer on the back removed (73%), and have a skin cancer on the face removed (63%). Compared to women, men were twice more likely to prefer dermatologists to remove skin cancers of the face over other healthcare providers (Adjusted Odds Ratio [AOR], 2.03; 95% confidence interval [CI], 1.23-3.35). Furthermore, those with postgraduate degrees were 1.82 times more likely to prefer dermatologists to remove skin cancers of the face compared to those with only college degrees(AOR 1.82; 95% CI, 1.01-3.27). Of 561 PCP respondents, 60% of PCPs selected a Mohs fellowship trained dermatologist as the best physician to perform Mohs surgery (Figure 1), compared to dermatologists (22%) and plastic surgeons (16%). Compared to male PCPs, women PCPs are more than 1.5 times more likely to select a Mohs fellowship trained dermatologist as the most qualified physician to perform Mohs surgery (AOR, 1.56; 95% CI, 1.09-2.24). US medical school graduates are also more likely to select a Mohs fellowship trained dermatologist as the most qualified physician to perform Mohs surgery, relative to foreign medical school graduates(AOR, 1.52; 95% CI, 1.05-2.21). Seventy percent of PCPs correctly defined Mohs surgery (Figure 2). PCPs who diagnosed a greater number of skin cancers were more likely to correctly define Mohs surgery; specifically, with each additional skin cancer diagnosed, the PCP had increased adjusted odds of 1.08 (95% CI, 1.01-1.16) of correctly defining

Tromovitch Award Abstract Session — Thursday, May 3: 3:30 – 4:30 pm

Mohs surgery. Compared to those with exposure to dermatology in medical school, PCPs without exposure to dermatology in medical training were about half as likely to correctly define Mohs surgery (AOR, 0.51; 95% CI, 0.30-0.89). Furthermore, foreign medical graduates were significantly less likely to correctly define Mohs surgery compared to US medical graduates (AOR, 0.63; 95% CI, 0.41-0.95). Aside from Mohs surgery, PCPs selected dermatologists (56%) as the most qualified specialty physicians to perform all other types of skin cancer surgery, compared to plastic surgeons (40%), otolaryngologists (3%), and ophthalmologists (1%).

CONCLUSION: Despite the subspecialty nature of Mohs surgery, most PCPs knew enough about the procedure to correctly define it. Most PCPs preferred Mohs fellowship trained dermatologists over non-fellowship trained dermatologists and plastic surgeons to perform Mohs surgery. Dermatologists were also recognized by both the lay public and PCPs as the most qualified expert for cutaneous oncologic surgery. Statistical trends were identified that may help improve the education of the public and PCPs regarding cutaneous oncologic surgery.

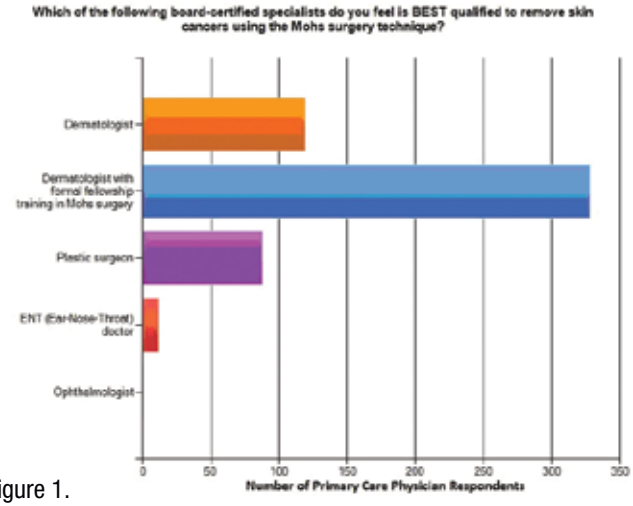


Figure 1.

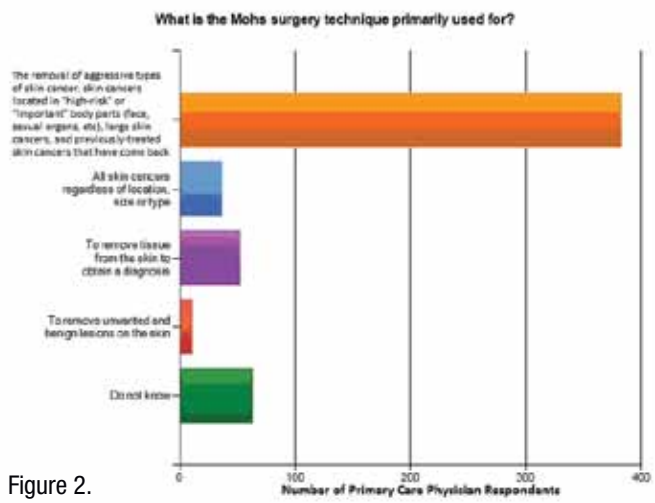


Figure 2.

4:06 – 4:14 pm

PRESENTER: Christopher W. Weyer, DO

TITLE: Investigation of Hyfrecators and their In Vitro Interference with Implantable Cardiac Devices

AUTHORS: Christopher W. Weyer, DO[1]; Ronald J. Siegle, MD[2]; Guillaume Girard, Eng[3]

INSTITUTIONS: 1. Dermatology, Cleveland Clinic Foundation, Cleveland, OH, United States 2. Otolaryngology, The Ohio State University, Columbus, OH, United States 3. Cardiac Rhythm Management, Medtronic, Mounds View, MN, United States

PURPOSE: This study performed in-vitro testing to investigate the potential interference of cardiac rhythm management (CRM) devices by Hyfrecators

DESIGN: Using a collagen based saline gel, 3 Implantable Pulse Generators (IPG or pacemaker) and 3 Implantable Cardiovertor Defibrillators (ICD or defibrillator) were tested to measure the electromagnetic interference (EMI) from 2 commonly used Hyfrecator units. The 6 devices were tested using the Hyfrecator under "normal use" settings and on maximum power.

SUMMARY: Testing showed that using Hyfrecator devices show no interference with defibrillators and Hyfrecators only affected pacemakers when used in close proximity to the device. For the pacemakers, atrial inhibition was observed at a distance of 3 cm on maximum Hyfrecator settings and 1cm at "normal use". Ventricular inhibition occurred in very close proximity to the device (<1cm) or in direct contact.

CONCLUSION: This in vitro study suggests that Hyfrecators are safe to use in patients with defibrillators and can be used in pacemaker patients within 2 inches of the device perimeter.

Figure 1. CRM device test setup using a collagen tank

Figure 2. Distance of Hyfrecator wand to a pacemaker device, causing atrial inhibition at both "normal use" of 10W and High setting of 30W

4:14 – 4:22 pm

PRESENTER: Gary W. Mendese, MD

TITLE: **IMP3, A Novel Immunohistochemical Marker that Highlights Keratinocyte-derived Skin Cancers Enabling Differentiation from Benign Tumors during Mohs Micrographic Surgery**

AUTHORS: Gary W. Mendese, MD[1,2]; Gary S. Rogers, MD[2]; Donald J. Grande, MD[1]

INSTITUTION: 1. Mystic Valley Dermatology, Stoneham, MA, United States 2. Dermatology, Tufts University School of Medicine, Boston, MA, United States

PURPOSE: Insulin-like growth factor-II messenger RNA (mRNA)-binding protein-3 (IMP3), also known as K homology domain-containing protein over expressed in cancer or L523S, is a member of the insulin-like growth factor-II mRNA-binding protein family and has been shown to have diagnostic utility in distinguishing between numerous malignancies from their commonly confused benign counterparts. The marker has been used in melanoma, urothelial, renal, pancreatic, lung and other carcinomas, and has proven to be useful in situations where limited tissue is available for a proper diagnosis. Not infrequently during Mohs Micrographic Surgery (MMS), the surgeon encounters an area at the margin of a cancer being resected that is difficult to diagnose as benign versus malignant. Benign adnexal tumors, tangential cuts, hair appendages and large follicles can be occasionally difficult to discern from basal cell carcinomas (BCC). It can occasionally be difficult to definitively diagnosis an actinic keratosis (AK) versus squamous cell carcinoma in situ (SCCIS). The purpose of this study is to assess the diagnostic utility of IMP3 in differentiating between non-melanoma skin cancers (NMSCs) and their mimics.

DESIGN: To assess the potential utility of IMP3 during MMS, the antibody was first applied to several paraffin-embedded tumors: SCC, BCC, SCCIS, AK, trichoepitheliomas and syringomas at a 1:17 dilution with 200ul per slide. Given the promising results seen, we are currently using IMP3 on first layer blocks found to have residual tumor during routine MMS. IMP3 is being applied using an automatic immunohistochemical stainer at a 1:17 dilution with 200ul per slide. Several benign adnexal tumors along with normal follicular epithelium and AKs are also included. The presence (graded on a scale of 1-3) or absence of IMP3 staining was observed for all tissue in question.

SUMMARY: In the paraffin-embedded tissue, SCCs and BCCs demonstrated 2-3+ staining for IMP3 in 93% (28/30) and 90% (18/20) respectively. No AKs (0/20) or trichoepitheliomas (0/20) stained positive for the marker, and only 5% (1/20) of syringomas stained positive for IMP3. Our study using an automated 15-minute immunohistochemical stainer to assess the utility of IMP3 during MMS is ongoing and parallels those observed with permanent sections.

CONCLUSION: It can be difficult at times to determine if an area within a Mohs section is benign or another Mohs layer need be taken. Since tissue is limited during MMS and numerous artifacts are encountered on frozen section, the diagnostic dilemma can be a difficult one. As has been demonstrated in other human malignancies, IMP3, which is virtually absent in all benign tissues except the placenta, can be a great aid during MMS. Although rapid immunohistochemical stainers are not available in every Mohs practice, the use of IMP3 can help the surgeon in diagnostically difficult situations. Our preliminary results with permanent sections show that IMP3 can be an invaluable aid in differentiating between NMSCs and their mimics on paraffin-embedded tissues. We believe the antibody will also prove useful during MMS, where a prompt definitive diagnosis with limited tissue is essential.

Tromovitch Award Abstract Session — Thursday, May 3: 3:30 – 4:30 pm

4:22 – 4:30 pm

PRESENTER: Kristina M. Collins, MD

TITLE: **Hot off the Press: Assessment of the Relative Perceived Newsworthiness of Cosmetic and Surgical Dermatology Using Content Analysis of Print News Media**

AUTHORS: Kristina M. Collins, MD[1,2]; Emily J. Fisher, MD[1,2]; Mollie A MacCormack,.MD[1,2]; Suzanne M. Olbricht, MD[1,2]

INSTITUTIONS: 1. Department of Dermatologic Surgery, Lahey Clinic, Burlington, MA, United States 2. Harvard Department of Dermatology, Boston, MA, United States

PURPOSE: Anecdotal evidence and a small body of previous research suggests that the general public frequently views dermatology as a primarily cosmetic specialty, and may fail to recognize dermatologists as surgeons or as physicians managing complex medical issues. Nevertheless, very little research has focused on the root of these assumptions by patients and within pop culture. The purpose of this research is to comparatively analyze news coverage of dermatology issues in major US print media across various categories, including cosmetic, oncologic, surgical, and medical.

DESIGN: Using the academic version of Lexis-Nexis, a database subject search was performed within the top ten widely circulated US newspapers for all dermatology-related news published over a 10-year period, from 2001-2011. A search was performed for articles with at least 85% relevance to a Lexis-Nexis subject term relevant to dermatology, including hair loss, dermatology, cosmetic treatments, nonsurgical cosmetic procedures, wound care, skin cancer, acne, dermatitis, eczema, psoriasis, and skin disorders. Articles were excluded from the study if the majority of the text was not actually relevant to a dermatology topic or the search result was an obituary, crime report, or local event. All 1,669 remaining news stories were included in the study and analyzed for content, with data recorded for source, general subject, specific topic, and whether the content was primarily cosmetic. For the purposes of the study, cosmetic information was defined as subject matter that would never be covered by insurance, affects appearance only, and has no relevance to a medical condition or disease. Because these articles were identified and reviewed based on a subject term search of dermatology-related topics, they were not required to specifically include the term "dermatology" within the text. Therefore, an additional search technique was performed in order to identify articles which repeatedly mention dermatology or dermatologists, as these articles may have an even greater impact on public perception of the specialty. For this separate search, a search syntax was created to identify articles that contained at least five mentions of dermatology in sources identified by Lexis-Nexis as "major US newspapers" over the same time period from 2001-2011. In this search, 991 articles were identified and similar exclusion criteria were used.

SUMMARY: Using a Lexis-Nexis database search of the most widely circulated US newspapers, we compared the relative coverage of cosmetic and non-cosmetic dermatology issues and found that 49% of articles had primarily cosmetic information. When news coverage was evaluated by broad subject matter, the topic most frequently covered was cosmetic procedures (32% of articles) and the most frequently encountered specific topic was Botox. When only articles containing at least five references to dermatology or dermatologists were examined, a similar emphasis on cosmetic news was identified. 301 of these articles included reference to Botox, fillers, or laser treatments while the total number of articles with even a single reference to melanoma was 232. There was a relative paucity of news coverage of non-melanoma skin cancers, with only 93 total articles including a single reference to either basal cell carcinoma or squamous cell carcinoma. Overall six articles contained a single reference to Mohs surgery, and of these, only three included at least a one sentence description of the procedure or its indications. Only one article discussed Mohs surgery in detail. Although national practice data indicates that the average dermatologist spends a minority of time per week on cosmetic dermatology, this study indicates that news coverage of dermatology focuses a majority of attention on aesthetic concerns. Negative press over the past ten years predominantly focused on economic interests in dermatology, relationships with industry, and "hard sell" tactics to promote cosmetic treatments.

CONCLUSION: We believe this is the first quantitative demonstration of the emphasis on cosmetic news over oncologic, surgical, or medical dermatology within the media. Non-melanoma skin cancers have received relatively scarce news coverage, and Mohs surgery was covered in detail in only one article over a ten year period. Insight into which topics within dermatology are generally considered "newsworthy" is essential in understanding common public perceptions about our field. Furthermore, identifying areas poorly covered may help guide future educational outreach programs.

Poster Presentation List

Posters will be displayed in the International Ballroom (2nd Floor) inside the Exhibit Hall. Posters will be displayed from 12:00 pm Thursday, May 3 through 1:30 pm Saturday, May 5.

001

Significant Bleeding Events Following Mohs Micrographic Surgery: Does Systemic Anticoagulation Alter Risk?

Lael L. Leithauser, MD[1]; Janelle M. King, MD[1]; Elias E. Ayli, DO[1]; Adam Ingraffea, MD[1]; Brian Adams, MD[1]; Hugh M. Gloster, Jr., MD[1]

1. Dermatology, University of Cincinnati, Cincinnati, OH, United States

002

Bedside Pathology with Ex Vivo Fluorescence Confocal Microscopy to Guide Mohs Surgery

Antoni A. Bennàssar, MD[1]; Isaac Zilinsky, MD[2]; Susanna Puig, MD[1]; Cristina Carrera, MD[1]; Josep Malvehy, MD[1]

1. Dermatology, Hospital Clínic, Barcelona, Spain 2. Plastic Surgery, Sheba Medical Center, Tel Aviv, Israel

003

Chemowraps for Diffuse Actinic Damage: Need for Close Monitoring to Avoid Systemic Toxicity

Julia Tzu, MD[1]; Michael Sargen, BA[1]; Karolyn A. Wanat, MD[1]; Joseph F. Sobanko, MD[1]; Anokhi Jambusaria-Pahlajani, MD, MSCE[1]; Misha A. Rosenbach, MD[1]; Christopher J. Miller, MD[1]

1. University of Pennsylvania, Philadelphia, PA, United States

004

An Immunohistochemical and RT-PCR Evaluation of Dermatofibrosarcoma Protuberans (DFSP) for Platelet-derived Growth Factor Beta (PDGFB) and Platelet-derived Growth Factor Receptor Beta (PDGFRB)

Faramarz H. Samie, MD, PhD[1]; Jason M. Rizzo, BA[2]; Ari-Nareg Meguerditchian, MD[2]; Richard T. Cheney, MD[2]; Michael J. Buck, PhD[2]; Craig C. Miller, MD[2]; Nathalie C. Zeitouni, MD[2]

1. Dartmouth-Hitchcock Medical Center, Lebanon, NH, United States 2. Roswell Park Cancer Institute, Buffalo, NY, United States

005

The Effects of Video-based Patient Education for Wound Care Instructions on Patient Knowledge and Satisfaction after Cutaneous Surgery: A Randomized Controlled Trial

Rebecca C. Tung, MD[1]; Christina L. Kranc, MS4[1]; Krisanne Sisto, MD[1]; Vanessa Lichon, MD[1]; Anthony Peterson, MD[1]; Marsha Moran, RN[1]; Rong Guo[2]; Carole Banasiak[2]

1. Division of Dermatology, Loyola University Chicago, Stritch School of Medicine, Maywood, IL, United States 2. Loyola University Chicago, Stritch School of Medicine, Maywood, IL, United States

006

Clinical Stage of Merkel Cell Carcinoma and Survival are not Associated with Breslow Thickness of Biopsied Tumor

Leonid Izikson, MD[2,1]; Thomas N. Helm, MD[2]; Novie Sroa, MD[2]; Nathalie C. Zeitouni, MD[2]

1. Dermatology, Wellman Center for Photomedicine, Massachusetts General Hospital, Boston, MA, United States 2. Dermatology, Roswell Park Cancer Institute, Buffalo, NY, United States

007

Mohs Surgery for Nail Tumors: Avulsion is Unnecessary

Nathaniel J. Jellinek, MD[1,2]; Katharine Cordova, MD[1,3]

1. Dermatology Professionals, Inc., East Greenwich, RI, United States 2. Dermatology, University of Massachusetts Medical School, Worcester, MA, United States 3. Dermatology, Warren Alpert Medical School at Brown University, Providence, RI, United States

008

Management of Primary and Encountered Superficial Non-melanoma Skin Cancers with Mohs Surgery

Chong Wee Foo, MD[1]; Payam Tristani-Firouzi, MD[1]; Glen M. Bowen, MD[1]; Keith L. Duffy, MD[1]; Michael L. Hadley, MD[1]

1. Department of Dermatology, University of Utah, Salt Lake City, UT, United States

009

A Single Center Series of Dermatofibrosarcoma Protuberans Cases Treated by Frozen Section Mohs Micrographic Surgery

Haytham Al - Rawi, BMedSci, MBBS, MRCP[1]; Sanjay Rajpara, MBBS, MRCP, MD[2]; Sandeep Varma, BMedSci, MBBS, MRCP[1]; Anthony G. Perks, MBBS, FRCS, FRACS[3]; Iain H. Leach, MD[4]; William Perkins, MBBS, FRCP[1]

1. Dermatology, Queen's Medical Centre, Nottingham, United Kingdom 2. Dermatology, Aberdeen Royal Infirmary, Aberdeen, United Kingdom 3. Plastic Surgery, Queen's Medical Centre, Nottingham, United Kingdom 4. Pathology, Queen's Medical Centre, Nottingham, United Kingdom

Poster Presentation List

010

Non-invasive Imaging of NMSC using a Targeted Fluorocoxib Probe: Potential for Early Detection, Guided Biopsies, and Improved Margin Control

Ashley Wysong, MD, MS[1]; Hyejun Ra, PhD[2]; Emilio Gonzalez, PhD[2]; Irfan Ali-Khan, PhD[2]; Lawrence J. Marnett, PhD[3]; Sumaira Z. Aasi, MD[1]; Jean Y. Tang, MD, PhD[1]; Christopher H. Contag, PhD[2]

1. Department of Dermatology, Stanford University, Stanford, CA, United States 2. Clark Center for Biomedical Engineering and Sciences, Molecular Imaging Program, Stanford University, Stanford, CA, United States 3. A.B. Hancock Jr. Memorial Laboratory for Cancer Research, Departments of Biochemistry, Chemistry, and Pharmacology, Vanderbilt University, Nashville, TN, United States

012

DMM: the Mohs Surgeons' Program for Africa

John M. Strasswimmer, MD, PhD[1,2]

1. Dermatology Medical Missions, Inc., Delray Beach, FL, United States 2. Melanoma & Cutaneous Oncology, Lynn Cancer Institute, Boca Raton, FL, United States

013

Salvage Mohs Micrographic Surgery for Highly Destructive Facial Non-melanoma Skin Cancer

Benvon Moran, MB, BCh, BAO[1]; Bairbre Wynne, MD, MRCPI[1]; Patrick Ormond, MD, MRCPI[1]

1. Dermatology, St. James's Hospital, Dublin, Ireland

014

The Utility of Antihelical Cartilage Autografts for Reconstruction of Mohs Micrographic Surgery Defects

Robert J. Sage, MD[1]; Brian C. Leach, MD[1]; Joel Cook, MD[1]

1. Dermatologic Surgery, Medical University of South Carolina, Charleston, SC, United States

015

Evaluation for Residual Tumor of Mohs Micrographic Specimens of Clinically Resolved Preoperative Biopsy Sites

Soonyou Kwon, MD[1]; Hugh M. Gloster, Jr., MD[1]

1. Dermatology, University of Cincinnati, Cincinnati, OH, United States

016

Retrospective Evaluation of the Safety of Large Skin Flap and Graft Surgery in the Outpatient Setting

Adam R. Schmitt, BA[1]; Jeremy S. Bordeaux, MD, MPH[2,1]

1. Case Western Reserve University School of Medicine, Cleveland, OH, United States 2. Department of Dermatology, University Hospitals Case Medical Center, Cleveland, OH, United States

017

Skin Cancer in Lung Transplant Recipients

Jenny C. Hu, MD[1]; Rajan Saggar, MD[2]; Rajeev Saggar, MD[2]; Teresa Soriano, MD[1]

1. Division of Dermatology, David Geffen School of Medicine at UCLA, Los Angeles, CA, United States 2. Division of Pulmonary and Critical Care Medicine, David Geffen School of Medicine at UCLA, Los Angeles, CA, United States

018

Pain Control by a Two-step Irradiance Schedule Photodynamic Therapy of Basal Cell Carcinoma

Joseph P. Housel, MD[1,2]; Nathalie C. Zeitouni, MD[2,1]

1. Dermatology, University at Buffalo School of Medicine, Amherst, NY, United States 2. Dermatology, Roswell Park Cancer Institute, Buffalo, NY, United States

020

Asymmetric Sectioning of Mohs Micrographic Surgery Specimens

Hilary C. Reich, MD[1]; Sarah E. Schram, MD[1]; Theresa L. Ray, MD[1]; Peter K. Lee, MD, PhD[1]; Stephanie Wallschlaeger, HT[1]; Anna Deem, HT[1]

1. Dermatology, University of Minnesota, Minneapolis, MN, United States

021

Controlling Sharps Using a Cost-effective, Reusable Magnet

Anne J. Goldsberry, MD[1]; Rae Jean Broderick, RN[2]; Ross M. Levy, MD[2]

1. Department of Dermatology, Northwestern University, Feinberg School of Medicine, Chicago, IL, United States 2. Dermatology Surgery Unit, Division of Dermatology, NorthShore University HealthSystem, Skokie, IL, United States

Poster Presentation List

022

Squamous Cell Carcinoma In Situ of the Ear

Kachiu C. Lee, MD[1]; H. William Higgins, II, MD[1]; Newsha Lajevardi, BA, MS[1]; Antonio P. Cruz, MD[1]; Raymond G. Dufresne, Jr., MD[1]

1. Dermatology, Brown University, Providence, RI, United States

023

Mohs Micrographic Surgery for Atypical Fibroxanthoma: A Retrospective Review of 68 Cases

Andrew M. Swanson, MD[1]; Juliet L. Gunkel, MD[1]; B. Jack Longley, MD[1]; Stephen N. Snow, MD[1]

1. Department of Dermatology, University of Wisconsin - Madison, Madison, WI, United States

024

Use of Full Thickness Skin Grafts to Repair Lower Eyelid Defects Involving the Eyelid Rim

Lixia Z. Ellis, MD, PhD[1]; Misha D. Miller, MD[1]; Renata Prado, MD[1]; Mariah R. Brown, MD[1]; J. Ramsey Mellette, Jr., MD[1]

1. Dermatology, University of Colorado, Denver, CO, United States

025

Diagonal Tarsal Suture Technique Sine Marginal Sutures for Primary Lid Closure

Andrea Willey, MD[1,2]; Richard H. Caesar, MA, MB, Bchir, FRCOphth[3]

1. Solano Dermatology Associates, Sacramento, CA, United States 2. University of California, Davis, Sacramento, CA, United States 3. Cheltenham General Hospital, Cheltenham, Gloucestershire, United Kingdom

026

Incidence and Treatment of Non-melanoma Skin Cancer in Ontario, Canada

Joseph Doumit, MD[1]; Julie Lacroix, MD[1]; Megan Collie[2]; Ryan Kroll[2]; Adam J. Mamelak, MD[1,3]

1. Dermatology, University of Ottawa, Ottawa, ON, Canada 2. Queen's University School of Medicine, Kingston, ON, Canada 3. Sanova Dermatology, Austin, TX, United States

027

Novel Pedicle Design Enhances Utility of Tunneled Island Pedicle Flap for Single-staged Repair of Auricular Defects

Nisha Desai, MD[1]; Hakeem Sam, MD, PhD[1]

1. Department of Dermatology, University of Pittsburgh Medical Center, Pittsburgh, PA, United States

028

A Histopathologic Frozen Section Digital Database for the Mohs Surgeon in Training

Mark F. Suchter, MD[1,2]; Christine E. Cabell, MD[1,2]; Victor J. Marks, MD[2]

1. Procedural Dermatology, Geisinger Wyoming Valley Medical Center, Wilkes-Barre, PA, United States 2. Procedural Dermatology, Geisinger Medical Center, Danville, PA, United States

029

A Comparison of Wound Reactivity to Two Common Postoperative Ointments

Adisbeth Morales-Burgos, MD[1]; Michael P. Loosemore, MD[1]; Leonard H. Goldberg, MD[1]

1. Methodist Hospital, Houston, TX, United States

030

Profile of Female Mohs Patients

Kachiu C. Lee, MD[1]; H. William Higgins, II, MD[1]; Ugur Uslu, BA[1]; Raymond G. Dufresne, Jr., MD[1]; Antonio P. Cruz, MD[1]

1. Dermatology, Brown University, Providence, RI, United States

031

Basal Cell Carcinoma of the Upper Lip

H. William Higgins, II, MD[1]; Kachiu C. Lee, MD[1]; Newsha Lajevardi, BA, MS[1]; Antonio P. Cruz, MD[1]; Raymond G. Dufresne, Jr., MD[1]

1. Dermatology, Brown University, Providence, RI, United States

032

Mohs Micrographic Surgery at an Academic Mohs Center, 10 Year Comparison (2001-2011)

H. William Higgins, II, MD[1]; Kachiu C. Lee, MD[1]; Ugur Uslu, BA[1]; Raymond G. Dufresne, Jr., MD[1]; Antonio P. Cruz, MD[1]

1. Dermatology, Brown University, Providence, RI, United States

033

Grossly Inaccurate Dermatology and Mohs Surgery Physician Rosters Maintained by Private Health Insurers in 3 Major US Cities

Jennifer A. Cafardi, MD[1]; Richard Torbeck, III, MS, BA[1]; Pryze Smith, PhD[2]; Brett M. Coldiron, MD, FACP[1]

1. The Skin Cancer Center/TriHealth, Cincinnati, OH, United States 2. Hatton Research Institute, Cincinnati, OH, United States

Poster Presentation List

034

Comparing MITF to Mart-1 Immunostaining of Frozen Radial Sections in the Treatment of Lentigo Maligna

Mark A. Hyde, MMS, PA-C[1,2]; Glen M. Bowen, MD[1,2]; Anneli R. Bowen, MD[2]

1. Melanoma and Cutaneous Oncology, Huntsman Cancer Institute at the University of Utah, Salt Lake City, UT, United States 2. Department of Dermatology, University of Utah, Salt Lake City, UT, United States

035

Repair of Difficult Post-Mohs Defects with Porcine Urinary Bladder Extracellular Matrix

Gunjan M. Modi, MD[1]; Mohsin Mir, MD[1]; Jodi S. Markus, MD[1]; Ida F. Orengo, MD[1]

1. Dermatology, Baylor College of Medicine, Houston, TX, United States

036

Use of Porcine Xenografts on Large Partial-thickness Vermillion and Mucosal Lower Lip Mohs Defects

Amanda J. Pickert, MD[1]; Shari A. Nemeth, MD[1]

1. Dermatology, Mayo Clinic Arizona, Scottsdale, AZ, United States

037

The Island Pedicle Flap is a Cosmetically Acceptable Alternative to more Conventional Repairs for Subcentimeter Defects on the Lower Two-thirds of the Nose

Gary W. Mendese, MD[1,2]; Donald J. Grande, MD[1,2]; Stuart H. Bentkover, MD[3,4]

1. Mystic Valley Dermatology, Stoneham, MA, United States 2. Dermatology, Boston University School of Medicine, Boston, MA, United States 3. Bentkover Facial Plastic Surgery and Laser Center, Worcester, MA, United States 4. Harvard Medical School, Boston, MA, United States

038

Bovine Collagen Xenograft Repair of Extensive Surgical Scalp Wounds with Exposed Calvarium

Jordan B. Slutsky, MD[1]; Megan Rogge[1]; M. Laurin Council, MD[1]; Scott W. Fosko, MD[1]

1. Dermatology, Saint Louis University, St. Louis, MO, United States

039

Full-thickness Skin Grafts Do Not Need Tie-over Bolster Dressings

Ikue Shimizu, MD[1]; Deborah F. MacFarlane, MD, MPH[1]

1. Dermatology, UT MD Anderson Cancer Center, Houston, TX, United States

Poster Presentation Summaries

001

TITLE: **Significant Bleeding Events Following Mohs Micrographic Surgery: Does Systemic Anticoagulation Alter Risk?**

AUTHORS: *Laurel L. Leithauser, MD[1]; Janelle M. King, MD[1]; Elias E. Ayli, DO[1]; Adam Ingraffea, MD[1]; Brian Adams, MD[1]; Hugh M. Gloster, Jr., MD[1]*

INSTITUTION: 1. Dermatology, University of Cincinnati, Cincinnati, OH, United States

PURPOSE: We sought to determine the frequency of significant postoperative bleeding events following Mohs micrographic surgery among patients taking a variety of systemic anticoagulant agents compared with controls taking no anticoagulant medications, and to determine whether patient demographics influence the rate of bleeding complications.

DESIGN: A retrospective chart review of 901 patients undergoing Mohs micrographic surgery at a University from June 2007 through January 2011 was performed. The medical records were analyzed for significant postoperative bleeding episodes, and patients taking a variety of anticoagulant medications were compared with controls taking no anticoagulation. Patient demographic data including gender, race and age were also evaluated with respect to bleeding risk using a logistical regression model.

SUMMARY: Patients on any type of systemic anticoagulant had a significantly greater risk of serious postoperative bleeding than controls (p=0.005), men were more likely to experience bleeding than women (p=0.01), and older patients were more likely to experience bleeding episodes than younger patients (p=0.0008). Patients taking aspirin alone (p=0.02), aspirin and warfarin (p=0.03), clopidogrel alone (p=0.02) and aspirin, warfarin and clopidogrel (p=0.05) were more likely to experience bleeding events than non-anticoagulated controls. In a multi-variable logistical regression analysis, older age (p=0.01), clopidogrel alone (p=0.01) and the combination regimen of clopidogrel, aspirin and warfarin (p=0.02) remained independent variables for increased bleeding risk.

CONCLUSION: Older patients and patients taking clopidogrel either alone or in combination with aspirin and warfarin are at increased risk for significant postoperative bleeding complications compared with controls. Men and patients taking aspirin either alone or in combination with warfarin may be at increased risk for severe postoperative bleeding, although these factors were no longer significant after controlling for other variables.

Table 1. Patient Characteristics and Significant Bleeding Events

Patient characteristics	All	Bleeding	No Bleeding
All patients	901	34/901 (3.8%)	867/901 (96.2%)
Male	558	28/558 (5.0%)	530/558 (95.0%)
Female	344	6/344 (1.7%)	338/344 (98.3%)
Mean age	70.47	72.4	69.2
No systemic anticoagulation	502	11/502 (2.2%)	489/502 (97.8%)
Any systemic anticoagulation	399	23/399 (5.8%)	376/399 (94.2%)
One agent	333	19/333 (5.7%)	314/333 (94.3%)
Aspirin only	278	15/278 (5.4%)	263/278 (94.6%)
Clopidogrel only	10	2/10 (20%)	8/10 (80%)
Warfarin only	45	2/45 (4.4%)	43/45 (95.6%)
Two or more agents	66	4/66 (6.1%)	62/66 (93.9)
Aspirin and clopidogrel	36	0/36 (0%)	36/36 (100%)
Aspirin and warfarin	28	3/28 (10.7%)	25/28 (89.3%)
Aspirin, clopidogrel and warfarin	2	1/2 (50%)	1/2 (50%)

A significant bleeding event was defined as bleeding occurring within three weeks following cutaneous surgery requiring medical intervention such as re-suturing, electrocoagulation or re-application of a pressure dressing. Bleeding events which resolved with pressure at home were not considered significant.

Table 2. Univariate and Multivariable Logistical Regression Analysis of Significant Bleeding Complications With Respect To Individual Variables

Variable	Univariate analysis (Chi Square, Fisher's exact or T-test)	Multivariable logistical regression
Male gender	P=0.01 (Chi-square)	P=0.06 (corrected for age and anticoagulant type)
Older age	P=0.008 (T-test)	P=0.01 (corrected for sex and anticoagulant type)
Any anticoagulant	P=0.005 (Chi-square)	P=0.18 (corrected for sex and age)
Two or more agents	P=0.08 (Fisher's exact)	P= 0.27 (corrected for sex and age)
Aspirin alone	P=0.02 (Chi-square)	P=0.15 (corrected for sex and age)
Clopidogrel alone	P=0.02 (Fisher's exact)	P= 0.01 (corrected for sex and age)
Warfarin alone	P= 0.29 (Fisher's exact)	P=0.47 (corrected for sex and age)
Aspirin and warfarin	P=0.03 (Fisher's exact)	P=0.06 (corrected for sex and age)
Aspirin, clopidogrel and warfarin	P=0.05 (Fisher's exact)	P=0.02 (corrected for sex and age)

Poster Presentation Summaries

002

TITLE: **Bedside Pathology with Ex Vivo Fluorescence Confocal Microscopy to Guide Mohs Surgery**

AUTHORS: *Antoni A. Bennàssar, MD[1]; Isaac Zilinsky, MD[2]; Susanna Puig, MD[1]; Cristina Carrera, MD[1]; Josep Malvehy, MD[1]*
INSTITUTIONS: 1. Dermatology, Hospital Clínic, Barcelona, Spain 2. Plastic Surgery, Sheba Medical Center, Tel Aviv, Israel

PURPOSE: BACKGROUND: Real-time high-resolution imaging of human skin is possible with a confocal microscope. Ex vivo fluorescence confocal mosaicing microscopy (FCM) offers an attractive alternative to frozen histopathology during Mohs surgery since nuclear and cellular morphology may be observed in real time and directly in freshly excised tissue similar to that in conventional histology. An application of interest is rapid detection of residual basal cell carcinoma (BCC) in skin excisions during Mohs surgery.

OBJECTIVES: 1. To evaluate the overall sensitivity (Se), specificity (Sp), positive predictive value (PPV) and negative predictive value (NPV) of ex vivo imaging with FCM for the detection of residual BCC in Mohs fresh tissue excisions.

2. To describe and validate FCM criteria for the diagnosis of BCC.

DESIGN: METHODS: Seventy-five consecutive patients from our Mohs Surgery Unit with eighty surgically removed BCCs were prospectively enrolled in the present study. All lesions underwent Mohs surgery.
One hundred and twenty skin samples were prospectively collected during Mohs surgery, consisting of excisions with and without residual BCC of all major subtypes. The tissue was stained with acridine orange and imaged with an ex vivo fluorescence confocal mosaicing microscope in fields of view of 12x12 mm. Each mosaic was divided into 2 or 4 subsections, resulting in 400 submosaics for study. The Mohs surgeon (presenting author) and two dermatopathologists who were blinded to the cases, independently assessed the confocal images and the frozen sections (Gold standard) respectively, recording the presence or absence of BCC.

SUMMARY: 1. The overall Se, Sp, PPV, NPV of ex vivo FCM detecting residual BCC was 88%, 99%, 98% and 97% respectively. Very good correlation was observed for benign and malignant skin structures.

2. Seven different BCC criteria for FCM were described and evaluated including, fluorescence, demarcation, nuclear crowding, palisading, clefting, nuclear pleomorphism, and enlarged nuclear to citoplasm ratio (Figure 1). The correlation with conventional histology was very good (Kappa: 0.89).

3. Moreover the new technique took half time when compared with the processing with conventional hematoxilin & eosin frozen sections.

CONCLUSION: The results demonstrate the feasibility of confocal mosaicing microscopy in fresh tissue toward rapid surgical bedside pathology to potentially guide Mohs surgery.

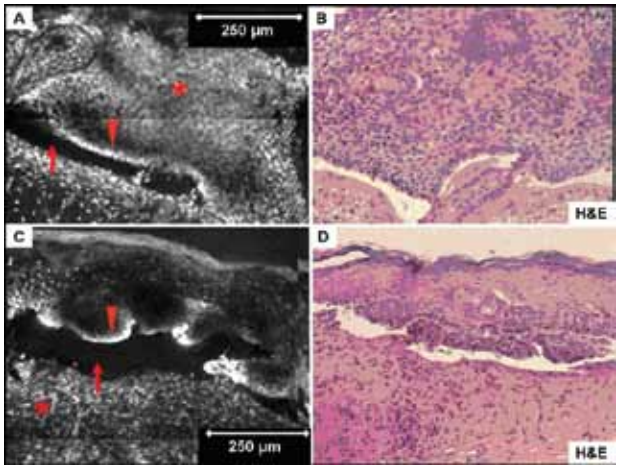


Figure 1.

003

TITLE: **Chemowraps for Diffuse Actinic Damage: Need for Close Monitoring to Avoid Systemic Toxicity**

AUTHORS: *Julia Tzu, MD[1]; Michael Sargen, BA[1]; Karolyn A. Wanat, MD[1]; Joseph F. Sobanko, MD[1]; Anokhi Jambusaria-Pahlajani, MD, MSCE[1]; Misha A. Rosenbach, MD[1]; Christopher J. Miller, MD[1]*
INSTITUTION: *1. University of Pennsylvania, Philadelphia, PA, United States*

PURPOSE: The risk of systemic absorption from application of 5-fluoruracil under occlusion or to ulcerated skin is unclear. Mann et al. described a modified approach to treating diffusely actinically damaged skin with topical 5-FU applied under an Unna boot (chemowrap). In their series of over 200 patients, they reported local irritation and hair loss in two patients, but no signs or symptoms of systemic toxicity were reported. We report a case of a woman who developed systemic side effects related to topical 5-FU chemowraps on a single lower leg. We also present a more conservative treatment regimen that may reduce the risk of developing systemic complications from chemowraps.

DESIGN: A 64 year old female with diffusely actinically damaged lower legs underwent treatment with a 5-FU chemowrap. The actinic keratoses on her left lower leg were first shaved and curetted, and then covered with 5-FU and an Unna wrap. The patient returned one week later and the chemowrap was removed. She had a brisk local response with confluent erythema under the wrap, but no ulcerations of her skin aside from those induced by curettage. The chemowrap was applied again. The following day the patient returned to clinic complaining of fevers, chills, and an erythematous eruption on her lower abdomen. The chemowrap was removed immediately, and her symptoms resolved. Following a two week break from therapy, her erythema nearly resolved, and the chemowrap was reapplied. Five days later the patient returned to clinic with fever (102 F), chills, fatigue, diarrhea, shortness of

breath, dark urine, and an eruption consisting of pink macules on her proximal trunk and proximal extremities. Actinic keratoses remote from the treated area were also inflamed. On examination, her left lower leg had deep, confluent erythema with erosions of the epidermis over >50% of the treated skin surface. The patient was hospitalized for further management. Laboratory workup revealed a mild transaminitis (ALT=219 IU/L, AST=161 IU/L). CBC, CMP, and urinalysis were all within normal limits. A dihydropyrimidine dehydrogenase gene mutation assay was negative. After receiving intravenous fluids, her systemic symptoms resolved. Since this episode with systemic symptoms, the patient's other three limbs have been successfully treated with chemowraps using a revised treatment protocol (described below).

SUMMARY: Contrary to the results reported in Mann's large case series, our case study demonstrates that, application of topical 5-FU to large surface areas under occlusion carries risks for systemic side effects. There are few guidelines to determine a maximum surface area for safe application, the effect of occlusion on absorption, and the amount of absorption when applied to eroded skin. Due to these uncertainties, we have instituted the following more conservative treatment protocol to prevent systemic side effects.

1. Application of the 5-FU and Unna boot on a Monday and removal of the wraps on Thursday or Friday (first application of chemowrap for only 4-5 days prior to assessment). 2. Stop with chemowraps once the treated area exhibits erosions 3. If some lesions ulcerate and there are still residual areas in the treatment field that require additional 5-FU, the medication should be applied twice daily without occlusion to allow immediate titration of dose according to symptoms.

CONCLUSION: Systemic toxicity can occur from 5-FU chemowraps. We recommend a conservative treatment protocol with close patient monitoring and shorter application times between patient visits.

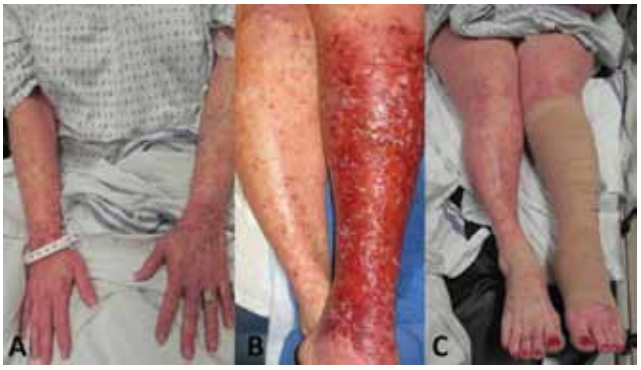


Figure 1.

004

TITLE: **An Immunohistochemical and RT-PCR Evaluation of Dermatofibrosarcoma Protuberans (DFSP) for Platelet-derived Growth Factor Beta (PDGFB) and Platelet-derived Growth Factor Receptor Beta (PDGFRB)**

AUTHORS: *Faramarz H. Samie, MD, PhD[1]; Jason M. Rizzo, BA[2]; Ari-Nareg Meguerditchian, MD[2]; Richard T. Cheney, MD[2]; Michael J. Buck, PhD[2]; Craig C. Miller, MD[2]; Nathalie C. Zeitouni, MD[2]*

INSTITUTIONS: 1. Dartmouth-Hitchcock Medical Center, Lebanon, NH, United States 2. Roswell Park Cancer Institute, Buffalo, NY, United States

PURPOSE: A chromosomal translocation involving chromosomes 17 and 22, leading to the placement of the platelet-derived growth factor beta (PDGFB) under control of the highly active collagen 1 alpha 1 (COL1A1) promoter, is implicated in the development of dermatofibrosarcoma protuberans (DFSP). This translocation results in the constitutive expression of PDGF-β, leading to the continuous activation of platelet-derived growth factor receptor (PDGFR), a tyrosine kinase receptor, which promotes DFSP growth. Although, the gold standard for the treatment of the DFSP is wide local excision, not all tumors are amenable to surgery. Imatinib, a tyrosine kinase inhibitor, has been approved for use in unresectable, recurrent and/or metastatic DFSPs. However, studies have demonstrated partial and inconsistent response to imatinib. The variable response to imatinib may be the result of heterogeneity of DFSPs at the molecular level. Due to the potential side effects and the cost of the drug, it seems prudent to limit the treatment to patients that harbor the translocation. Immunohistochemical assays are readily available and a potentially useful tool to select patients for molecular targeted therapy. Here, we confirm that PDGF-β, the product of the pathologic chromosomal translocation, can be detected in paraffin-embedded primary DFSP samples with standard immunohistochemical assays, thus, providing an easy method to identify patients that may respond to IM therapy. Using RT-PCR, we have further confirmed these results by demonstrating expression of PDGFB, and PDGFRB transcripts in DFSP tumors.

DESIGN: Tissue samples of DFSPs were obtained from 17 patients identified from our tumor registry. Formalin-fixed paraffin-embedded tumor samples were graded for the proportion of tumor cells showing immunoreactivity for the antibody and for the intensity of staining. Negative immunoreactivity was defined when no tumor cells showed nuclear or cytoplasmic staining. Weakly positive, moderately positive, and strongly positive immunoreactivity was defined as staining in 1-10%, 10-50%, and greater than 50% of atypical tumor cells respectively. Intensity was graded as zero, low, medium, and high. Tumors were also compared for levels of PDGFB and PDGFRB mRNA by quantitative RT-PCR and were recorded as fold increase over matched control dermal samples normalized to the housekeeping gene porphobilinogen deaminase.

Poster Presentation Summaries

SUMMARY: Staining patterns were analyzed in all 17 tumors. PDGF-expression was demonstrated in all 17 samples. In 100% (17/17) of the samples, anti-PDGF- antibodies demonstrated strongly positive staining patterns. The intensity of staining was graded as at least medium in 88% (15/17) and low in 12% (2/17) of the samples. The vast majority (88%; 15/17) of tumor samples showed a marked up-regulation (fold-change > 1) in expression for both PDGFB and PDGFRB transcripts relative to matched normal tissues. A larger degree of transcript up-regulation was seen for PDGFB as 76% (13/17) of tumor samples showed a greater than 3-fold up-regulation compared to only 41% (7/17) showing up-regulation of PDGFRB. Overall, PDGFB expression correlated well to expression of PDGFRB (r = 0.83) across all samples.

CONCLUSION: The robust PDGFB expression, as demonstrated by IHC, suggests that chromosomal translocation t(17;22) occurs in the vast majority of DFSPs. This data is further supported by demonstration of high levels of PDGFB and PDGFRB mRNA expression by RT-PCR. When considering imatinib for therapy of DFSP, immunohistochemistry may provide a powerful tool to quickly and easily identify patients that harbor t (17;22) translocation.

005

TITLE: **The Effects of Video-based Patient Education for Wound Care Instructions on Patient Knowledge and Satisfaction After Cutaneous Surgery: A Randomized Controlled Trial**

AUTHORS: *Rebecca C. Tung, MD[1]; Christina L. Kranc, MS4[1]; Krisanne Sisto, MD[1]; Vanessa Lichon, MD[1]; Anthony Peterson, MD[1]; Marsha Moran, RN[1]; Rong Guo[2]; Carole Banasiak[2]*

INSTITUTIONS: 1. Division of Dermatology, Loyola University Chicago, Stritch School of Medicine, Maywood, IL, United States 2. Loyola University Chicago, Stritch School of Medicine, Maywood, IL, United States

PURPOSE: To evaluate the effects of adding video-based education to traditional written and oral education for wound care instructions on patient comprehension, compliance and satisfaction after primary cutaneous excision or Mohs surgery.

DESIGN: We consecutively recruited patients who were recommended to have primary excision or Mohs surgery from August to September 2011. The patients were screened, consented and randomized to one of two study groups, Group A (control group) or Group B (video group). Before surgery, all participants completed a 15-item multiple choice questionnaire (pre-test) to assess baseline wound care knowledge. After surgery, all patients received the standard written and verbal wound care instructions. In addition, Group B participants watched a 2-minute instructional video. All patients completed the questionnaire for a second time (post-test) to assess a change in knowledge. The subjects then demonstrated the once-daily wound care steps for the investigators. Lastly, participants completed satisfaction and appeal assessments using 0-10 visual analog scales.

SUMMARY: A total of 31 patients were enrolled. The post-test score (Figure 1) was significantly higher (p=0.02) for patients who received video education when compared to those who did not (13.67 ± 1.23 in Group A vs. 14.69 ± 0.48 in Group B). The test score difference (Figure 2) between the pre-test and post-test was significantly higher (p=0.02) in participants who received video education when compared to the control group, suggesting a greater improvement in wound care knowledge in this group (2.67 ± 1.4 in Group A vs. 5.0 ± 2.63 in Group B). The video group also scored significantly higher (p=0.05) than the control group on the graded demonstration. All participants reported a high level of satisfaction, appeal and compliance. A trend toward higher satisfaction and appeal was noted in Group B, but the difference was not statistically significant (p=0.64 and 0.26, respectively).

CONCLUSION: Proper wound care following skin procedures is essential to optimize healing and minimize scarring and complications. Patient adherence is an important component of wound healing. A strong patient-physician relationship and solid patient education are critical elements in achieving high patient compliance and efficient implementation of recommended wound care. It is the physician's responsibility to give clear and concise wound care instructions after surgery to ensure a positive recovery period, but this can be challenging in the setting of a busy clinic. The addition of video education to traditional verbal and written wound care instructions is associated with a high level of patient satisfaction and acquisition of wound care knowledge. The combined audio-visual appeal leads to greater comprehension and a reduction in patient anxiety related to wound care responsibilities. This translates into improved wound healing, without requiring additional time from the physician. Dermatologic surgeons can take advantage of advancements in technology and consider utilizing video education to augment traditional patient education.

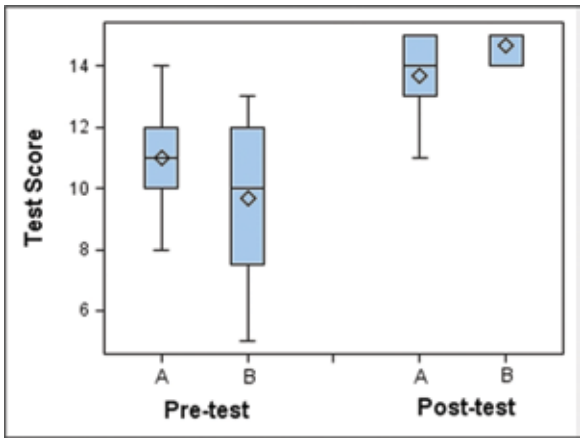


Figure 1. Boxplot of pre-test and post-test scores by group

Poster Presentation Summaries

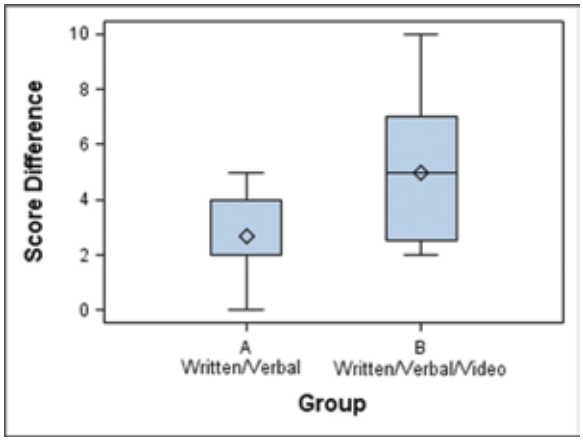


Figure 2. Boxplot of test score difference by group

006

TITLE: **Clinical Stage of Merkel Cell Carcinoma and Survival are not Associated with Breslow Thickness of Biopsied Tumor**

AUTHORS: *Leonid Izikson, MD[2,1]; Thomas N. Helm, MD[2]; Novie Sroa, MD[2]; Nathalie C. Zeitouni, MD[2]*

INSTITUTIONS: 1. Dermatology, Wellman Center for Photomedicine, Massachusetts General Hospital, Boston, MA, United States 2. Dermatology, Roswell Park Cancer Institute, Buffalo, NY, United States

PURPOSE: Merkel cell carcinoma (MCC) is an aggressive malignancy that often presents on the skin with concurrent metastatic disease. We asked whether Breslow thickness of biopsied MCC correlates with clinical disease stage in MCC patients.

DESIGN: We performed a retrospective review of clinical data and histopathology specimens from 34 MCC patients treated at the Cancer center, for whom complete clinical information and histopathology specimens were available.

SUMMARY: There was no correlation between Breslow thickness of biopsied MCC on the head and neck or body and clinical stage of disease, progression-free survival, or overall survival.

CONCLUSION: Thin MCCs should not be taken to represent lesions with less aggressive clinical behavior. Our findings validate the current practice of staging all newly-diagnosed MCC, irrespective of size or Breslow thickness, with clinical, radiologic, and histopathologic examination of sentinel lymph nodes, and with radiologic evaluation for possible metastatic disease in distant organs.

007

TITLE: **Mohs Surgery for Nail Tumors: Avulsion is Unnecessary**

AUTHORS: *Nathaniel J. Jellinek, MD[1,2]; Katharine Cordova, MD[1,3]*

INSTITUTIONS: 1. Dermatology Professionals, Inc., East Greenwich, RI, United States 2. Dermatology, University of Massachusetts Medical School, Worcester, MA, United States 3. Dermatology, Warren Alpert Medical School at Brown University, Providence, RI, United States

PURPOSE: Mohs surgery is commonly performed for malignant nail tumors, achieving high cure rates while sparing uninvolved skin. Traditionally, all such surgeries that involve the nail bed or matrix are preceded with total or partial nail plate avulsions. Plate removal facilitates gross examination of the nail bed, matrix, and lateral sulci, and is a logical preceding step to debulking/curettage of the tumor. Ideally, such avulsions are performed with minimal trauma to the thin epithelium of the nail bed so that subsequent histology demonstrates all representative epithelium for analysis.

We have appreciated that despite our best efforts during Mohs surgery, nail bed and/or matrix epithelium is occasionally missing on our Mohs slides, either from tearing/transection during avulsion and/or difficulty visualizing the thin epithelium during grossing. Alternatively, the histologic slides show only the basal layer of nail bed or matrix epithelium, with the superficial cells transected due to their tenacious adherence to the ventral plate.

A better method is needed.

DESIGN: In an effort to achieve a complete and full thickness epithelial margin, we started to gross and mount nail tumor specimens for frozen sections with the plate intact. We have found this to be a simple technique that reliably preserves the epithelial margin.

Prior to surgery, the excision (either Mohs layer or otherwise) is marked after careful examination with good surgical lighting and loop/dermoscopic magnification. Then the nail plate is softened by soaking the digit in warm water with or without an antiseptic solution such as chlorhexidine. The surgery is performed in routine fashion, however any cuts in the nail bed/matrix are made through the attached plate. Avulsion is avoided whenever possible. The tissue may then be removed with scalpel or scissors. During the grossing, mounting/embedding steps of surgery, the tissue is laid flush so that the plate and attached bed/matrix epithelium are mounted en face in whatever technique the surgeon and technician prefer. The authors mount the tissue directly on a frozen stainless steel chuck, and we have found that this technique is simple, efficient, and freezes the tissue quickly. Occasionally the nail bed, and to a lesser extent, matrix epithelium retract slightly from the plate when it is incised through to dermis and/or periosteum. To overcome this tendency and visualize plate and bed, one places mild pressure when pushing the tissue onto the chuck. Relaxing incisions are also needed in select cases.

Poster Presentation Summaries

Once frozen, the tissue is cut at a typical thickness (three to five microns thick in our lab), and stained in standard fashion. The tissue feels stiffer than typical sections because of the nail plate, and cuts easily.

SUMMARY: Histology reliably demonstrates the light staining plate in direct contact with the bed and/or matrix, although artefactual clefting has been observed along the plate/bed junction; however, this does not interfere with histologic interpretation.

The full range of nail histolopathology, benign and malignant, are easily observed with this technique – significantly more so than with sections cut after plate avulsion; commonly subungual epidermoid inclusions are appreciated. Identification of squamous cell carcinoma (invasive and in situ,) even quite focal, is quite straightforward when the surgeon/pathologist is familiar with nail subunit histology.

Multiple cases with both techniques will be demonstrated.

CONCLUSION: The traditional dogma of complete nail plate avulsion prior to all nail surgeries has been replaced with one advocating more selective, targeted techniques of partial plate avulsion. Perhaps a similar shift from a traditional approach is warranted during tissue processing of nail tumors for Mohs surgery and frozen section analysis. We have found that avoiding avulsion, cutting though the plate during excision and mounting the tissue with the plate intact, yields improved, high quality histologic specimens with preserved epithelium over the entire cut surgical margin.

008

TITLE: **Management of Primary and Encountered Superficial Non-melanoma Skin Cancers with Mohs Surgery**

AUTHORS: *Chong Wee Foo, MD[1]; Payam Tristani-Firouzi, MD[1]; Glen M. Bowen, MD[1]; Keith L. Duffy, MD[1]; Michael L. Hadley, MD[1]*

INSTITUTION: 1. Department of Dermatology, University of Utah, Salt Lake City, UT, United States

PURPOSE: The purpose of this study was to understand the current management practices of Mohs surgeons in the treatment of primary (previously untreated) superficial NMSC (superficial basal cell carcinoma and squamous cell carcinoma in-situ), as well as treatment of residual superficial NMSC encountered during Mohs surgery. In particular, we want to ascertain the prevalence of usage of alternative modalities (imiquimod, 5-fluorouracil, photodynamic therapy, curettage) as adjunct treatments for incidentally encountered superficial NMSC.

DESIGN: An internet-based questionnaire survey was sent to a total of 890 members of the American College of Mohs Surgery between September and October of 2011.

SUMMARY: We received a total of 212 responses (24% response rate). The results showed that a majority of Mohs surgeons will treat primary superficial basal cell carcinoma (sBCC) and squamous cell carcinoma in-situ (SCCIS) with additional stages of Mohs surgery, 87% and 91% respectively. Cited rationale included large tumor size (>2cm), location of tumor (face, eyelid), and indistinct clinical margins.

When sBCC is incidentally encountered during Mohs surgery, the majority (58%) of Mohs surgeons continue with additional stages until all carcinoma, including sBCC, is removed. Another 34% of surgeons will take additional stages with limits, and the majority (99%) of these surgeons will limit themselves to 4 additional stages.

When SCCIS is incidentally encountered during Mohs surgery, the majority (51%) will continue with Mohs surgery until all carcinoma, including SCCIS is removed. Another 42% of surgeons will take additional stages with limits, and the majority (92%) of these surgeons will limit stages to an additional 4 stages.

Survey data also showed that 50% of surgeons will be LESS likely to treat encountered superficial NMSC with Mohs surgery if the surgical site shows a background of actinic damage. Interestingly, most surgeons (78%) will NOT treat the surgical site with a topical agent prior to Mohs surgery, despite clinically suspecting a component of superficial NMSC in addition to original biopsied tumor.

CONCLUSION: Our initial data analysis showed that the majority of Mohs surgeons will treat primary and incidentally encountered superficial NMSC (sBCC and SCCIS) with additional stages of Mohs surgery until all tumor is cleared. Interestingly, a significant percentage of Mohs surgeons (~40%) will treat incidentally encountered superficial NMSC with additional, but limited, numbers of stages of Mohs surgery. This percentage was higher than expected. We hypothesize that these surgeons will pursue an alternative treatment modality to manage encountered superficial NMSC after aborting Mohs surgery. We are in the process of conducting a follow-up survey to learn about these alternate treatment modalities that are used. These additional results will also be presented during the meeting.

Poster Presentation Summaries

009

TITLE: **A Single Center Series of Dermatofibrosarcoma Protuberans Cases Treated by Frozen Section Mohs Micrographic Surgery**

AUTHORS: *Haytham Al - Rawi, BMedSci, MBBS, MRCP[1]; Sanjay Rajpara, MBBS, MRCP, MD[2]; Sandeep Varma, BMedSci, MBBS, MRCP[1]; Anthony G. Perks, MBBS, FRCS, FRACS[3]; Iain H. Leach, MD[4]; William Perkins, MBBS, FRCP[1]*

INSTITUTIONS: 1. Dermatology, Queen's Medical Centre, Nottingham, United Kingdom 2. Dermatology, Aberdeen Royal Infirmary, Aberdeen, United Kingdom 3. Plastic Surgery, Queen's Medical Centre, Nottingham, United Kingdom 4. Pathology, Queen's Medical Centre, Nottingham, United Kingdom

PURPOSE: Our aim was to review the details and recurrence rate of dermatofibrosarcoma protuberans (DFSP) cases treated by Mohs micrographic surgery (MMS) in our center between 1996 and 2011. We report the largest case series of DFSP patients treated by frozen section MMS.

DESIGN: Dermatofibrosarcoma protuberans (DFSP) is an uncommon soft tissue tumor of mesenchymal origin that is locally aggressive. It has a high recurrence rate. Mean recurrence rate for standard surgery has been reported to be 18% compared with 1.3% for MMS. There are no randomized controlled or prospective studies comparing the two surgical treatments.

Tumescent local anesthesia was used and the border of each tumor was marked at the clinically palpable margin for debulking. Mohs layers were taken at 1cm margin at each stage on the body, and at 0.5cm margin for the face.

SUMMARY: 67 patients (36 male and 31 female) were treated during this period. 60 cases were primary and 7 were recurrent. Mean age was 46 (range 17 - 82) years. The average duration of the lesion was 84 (range 2 – 480) months. The lesions were located on the back (11), chest (14), abdomen (7), limbs (27), head and neck (7) and genitalia (1). The average tumor/ scar size at maximum diameter/ length was 65.5 mm (range 15 – 250).

The average number of Mohs stages required was 2 (range 1-4), using an average of 12 (range 3 - 25) tissue blocks. Complete clearance was achieved with 1cm margin or less in 28 patients, 2cm margin or less in 22 patients, 3cm or less in 7 patients, 4cm or less margin in 4 patients and 5cm or more margin in 4 patients.

The defects were closed by direct primary closure (48), flap repair (4), split thickness skin graft (8) and secondary intention wound healing (3).

Average duration of follow up was 52.8 (range 2-132) months. There was one recurrence (1.49%). Our recurrence rate is similar to what is quoted in the literature.

CONCLUSION: We report the largest case series of DFSP patients treated by frozen section MMS. Our study confirms that MMS is the best treatment option for DFSP as it has a low recurrence rate as well as the advantage of being tissue sparing.

010

TITLE: **Non-invasive Imaging of NMSC using a Targeted Fluorocoxib Probe: Potential for Early Detection, Guided Biopsies, and Improved Margin Control**

AUTHORS: *Ashley Wysong, MD, MS[1]; Hyejun Ra, PhD[2]; Emilio Gonzalez, PhD[2]; Irfan Ali-Khan, PhD[2]; Lawrence J. Marnett, PhD[3]; Sumaira Z. Aasi, MD[1]; Jean Y. Tang, MD, PhD[1]; Christopher H. Contag, PhD[2]*

INSTITUTIONS: 1. Department of Dermatology, Stanford University, Stanford, CA, United States 2. Clark Center for Biomedical Engineering and Sciences, Molecular Imaging Program, Stanford University, Stanford, CA, United States 3. A.B. Hancock Jr. Memorial Laboratory for Cancer Research, Departments of Biochemistry, Chemistry, and Pharmacology, Vanderbilt University, Nashville, TN, United States

PURPOSE: The detection of NMSC depends on recognition of skin changes by the patient, high clinical suspicion by a trained dermatologist, and pathologic confirmation with biopsy. A non-invasive method to detect early skin cancer has been long desired. Cyclooxygenase-2 (COX-2) is highly unregulated in inflammation and cancer cells and is largely absent from normal cells. The importance of COX-2 in tumor progression has been documented in BCC and other cancers. A fluorocoxib probe (indomethacin labeled with 5-ROX) targeting COX-2 was developed and could function as an effective and non-invasive molecular probe for targeted imaging and early detection of NMSC.

DESIGN: Using a transgenic mouse model of NMSC (ptch1+/- K14 Cre ER p53 flox/flox), fluorocoxib was delivered via retro-orbital injection and whole animal, live mice were imaged 3 hours later with the MaestroTM fluorescence imaging system. Control mice of the same strain were imaged to unmix autofluorescence, then the resulting signal was thresholded for detection of macroscopic and microscopic tumors. After euthanasia, cutaneous tissues were excised and processed for histologic evaluation. In addition, human ex vivo studies were performed on 5 freshly excised Mohs surgery tumors. The tissue specimens were pre-washed in PBS and the probe was topically applied to the surface epidermis, after 30 minutes at room temperature, the tissue was washed in PBS and imaged with the MaestroTM system and a tabletop dual-axis confocal (DAC) microscope.

SUMMARY: Figure 1A-B shows in vivo whole-animal fluorescence imaging (unmixed and thresholded) where tumors A-F (Figure 1A, or region 1 using a lower threshold in Figure 1B) correspond to macroscopic, palpable tumor masses. Histology was performed on both macroscopic tumors as well as other sites without visible tumor mass but identified by fluorescent imaging, such as region 3 (Figure 1C-D, histology). Microscopic tumors were confirmed by a board certified dermatologist (Figure 1C 4x, Figure 1D 10x). Sensitivity and specificity analyses were performed showing 100% specificity (3/3) and 91% sensitivity (20/22) for macroscopic

Poster Presentation Summaries

tumors and 75% specificity (3/4) and 94% sensitivity (17/18) for microscopic tumors by in vivo imaging using the fluorocoxib probe, with the ability to detect microscopic tumors approximately 100-150 microns in size. In addition, excised human tumor tissue was imaged ex vivo applying the fluorocoxib probe topically and comparing to histologic examination. Imaging data and videos will be presented on tumor (Figure 2) and normal tissue. Finally, initial studies performed using a newly developed topical cream formulation of the fluorocoxib probe show accumulation within the tumor mass and penetration 0-5mm into the skin (peak concentrations at 1-3mm) on excised human tumors.

CONCLUSION: These preclinical data demonstrate the potential for early detection of non-melanoma skin cancer using the fluorocoxib probe in vivo in whole animal, live mice and ex vivo in excised human tissues. Ultimately, through further development of topical applications and clinical testing, targeted imaging using fluorocoxib may have future applications in early detection, guided biopsies, margin detection, and diagnosis of micrometastasis.

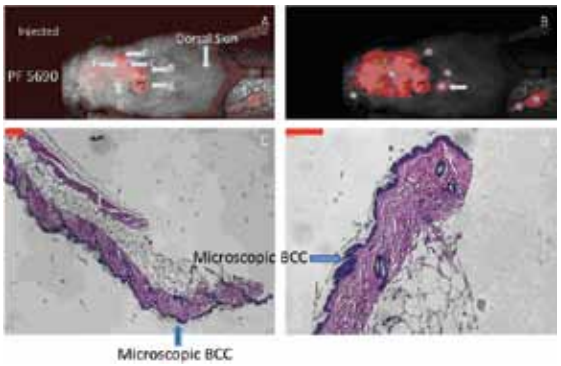


Figure 1.

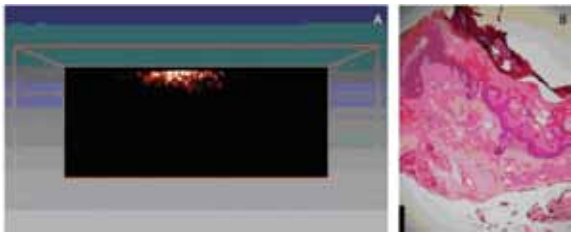


Figure 2.

012

TITLE: DMM: the Mohs Surgeons' Program for Africa

AUTHOR: John M. Strasswimmer, MD, PhD1,2

INSTITUTIONS: 1. Dermatology Medical Missions, Inc., Delray Beach, FL, United States 2. Melanoma & Cutaneous Oncology, Lynn Cancer Institute, Boca Raton, FL, United States

PURPOSE: Cancer care in the developing world is a new (2011) priority of the United Nations, as more people die there from cancer than from AIDS, TB, and malaria combined. Mohs surgeons are uniquely positioned to provide life saving prevention and cure for skin cancer in the developing world. Sub-Saharan Africa provides a special opportunity because of the high (up to 1:1,800) prevalence of albinism. In contrast to other specialists, such as plastic surgery, Mohs surgeons do not have an international charity program suited to the unique skills and clinical interests. We sought to identify programs which could potentially take advantage of the skills of the Mohs College physicians

DESIGN: As a result of hands-on skin cancer treatment missions to Africa, a two year review was undertaken to evaluate charitable organizations within the fields of dermatology and international health in order to determine the practicality of providing Mohs surgeons' services to the sub-Saharan African region. The review included both review of organizations' formal literature, interviews with directors, and interviews with the target recipients. Additional consultations with philanthropy consultants were obtained. A total of approximately 27,000 miles were flown over a two year period to evaluate in person both potential programs and locations.

SUMMARY: Consultation with representatives from medical charities (both related and unrelated to dermatology or Mohs surgery) revealed a complete absence of a US-based charitable 501 c (3) medical services program suited to support a visiting volunteer "medical mission" program for Mohs surgeons to Africa. As a result, Dermatology Medical Missions Inc, (DMM), was founded as a not for profit 501 c (3) organization. DMM exists to serve the need for Mohs surgeons to be able to donate time to overseas skin cancer care and to provide needy Africans with services. DMM is able to receive volunteer efforts to build skin cancer prevention, education, and surgery programs in Africa for members of the Mohs College.

CONCLUSION: Mohs surgery in particular, suffers from a lack of a comprehensive organized medical mission programs. Dermatology Medical Missions Inc, (DMM) is a program designed by and for Mohs College surgeons wishing to provide skin cancer services in Africa.

Poster Presentation Summaries

013

TITLE: Salvage Mohs Micrographic Surgery for Highly Destructive Facial Non-melanoma Skin Cancer

AUTHORS: *Benvon Moran, MB, BCh, BAO[1]; Bairbre Wynne, MD, MRCPI[1]; Patrick Ormond, MD, MRCPI[1]*

INSTITUTION: 1. Dermatology, St. James's Hospital, Dublin, Ireland

PURPOSE: To determine whether Mohs micrographic surgery (MMS) is of benefit in obtaining clear histological margins after wide clinical margins are excised and, in some cases, in preserving structures to facilitate superior subsequent defect repair in advanced non-melanoma skin cancers affecting the face.

DESIGN: A retrospective review of all salvage MMS cases of destructive facial non-melanoma skin cancers performed after wide local excision by the primary surgeon (plastic or otolaryngology) over a four-and-a-half-year period (June 2006 to January 2011) in a national MMS unit in a university teaching hospital.

SUMMARY: Ten patients were included in the study (five male and five female), with a mean age of 61.8 years (range 36 – 84). The majority of the tumors were squamous cell carcinomas (SCC; seven). The remainder was basal cell carcinomas (two) and dermatofibromasarcoma protuberans (one). Six of the lesions had been treated by conventional surgery in the past, and were recurrent.

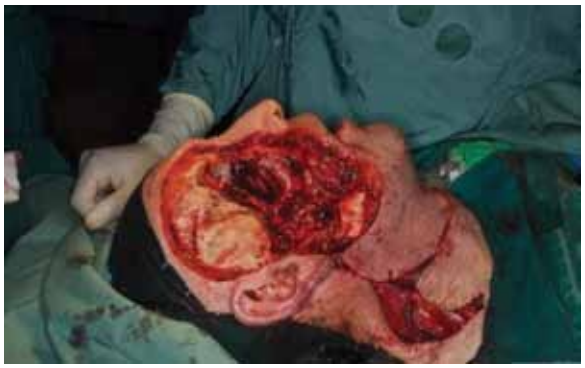
Excision of all tumors was performed under general anesthetic by the primary surgeon. Orbital exenteration was required in four cases, rhinectomy in three, maxillectomy in five and radical neck dissection in four patients. Clinical margins varied between patients, and in some cases the deep margin was preserved to allow a Mohs layer to be taken. Despite attempted clearance by standard surgery in the majority of cases (with margins of up to five cm), all patients required two Mohs layers to achieve histological clearance (in nine cases) and to confirm bony invasion (one case).

Mean patient follow-up was 31.2 months (range eight - 48). Two patients have died from their disease, including the patient with bony involvement (SCC).

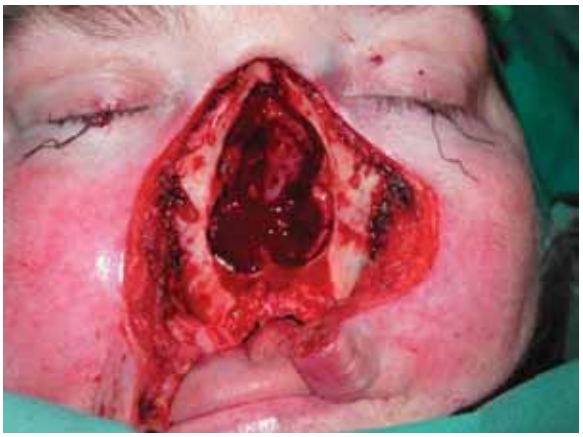
CONCLUSION: Salvage MMS for destructive, advanced, facial non-melanoma skin cancers was of benefit in our cohort. Clearance by standard methods was attempted in the majority of cases prior to the first Mohs layer – despite this all patients required two layers to achieve histological clearance.

60% of patients had recurrent skin cancers. If MMS had been available to them originally salvage surgery may not have been required, with a better cosmetic outcome for the patient.

A multi-disciplinary treatment approach is now used for these cases in our hospital, and the opinion of a Mohs surgeon is requested for all large cutaneous malignancies of the head and neck.



Defect after histological clearance by MMS



Large central facial defect following two Mohs layers

014

TITLE: The Utility of Antihelical Cartilage Autografts for Reconstruction of Mohs Micrographic Surgery Defects

AUTHORS: *Robert J. Sage, MD[1]; Brian C. Leach, MD[1]; Joel Cook, MD[1]*

INSTITUTION: 1. Dermatologic Surgery, Medical University of South Carolina, Charleston, SC, United States

PURPOSE: To illustrate the safety, efficacy, and versatility of antihelix donor site cartilage autografts in the reconstruction of Mohs micrographic surgery defects of the nose and auricle.

DESIGN: We performed a retrospective chart review of all cartilage autografts performed at our institution for the 5-year period from July 1, 2006 to June 30, 2011. Each case was reviewed for demographic data, graft donor site, repair type, complication (if occurred), and revision (if performed).

SUMMARY: A total of 307 auricular cartilage autografts for donor material were performed in 297 patients. 291 donor cartilage grafts were used as batten grafts for nasal ala or columella reconstruction and 16 helical or scaphoid strut grafts for reconstruction of auricular defects. The median follow up was 8 months. The donor site complication rate was low (3%). No patients voiced concern for cosmetic or functional deformity of the donor ear. No patients

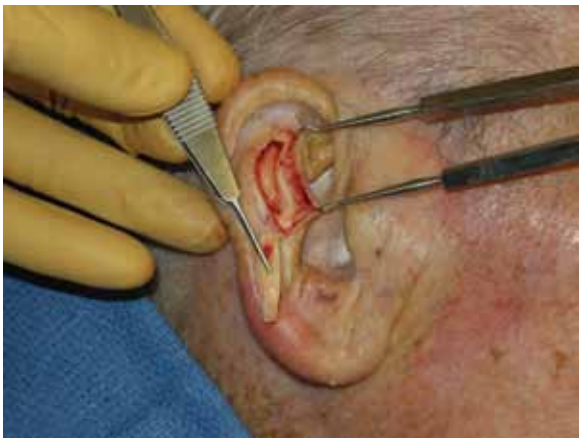
Poster Presentation Summaries

experienced cartilage graft resorption or infection.

CONCLUSION: Antihelix cartilage autografts can serve as a safe, effective, and versatile alternatives to septal, conchal bowl, and costal margin grafts. This conclusion is supported by their successful use in a wide variety of surgical reconstructive techniques with long-term follow-up. The authors feel strongly that the antihelix donor site should be favored over conchal bowl donor site when harvesting auricular cartilage for its easy accessibility with rapid harvest, large dimension that may be harvested, smooth texture, and graft flexibility with minimal morbidity.

Auricular Graft Statistics

GRAFT TYPE	n (%)
Alar/Columellar Batten	291 (94.8%)
Helical rim/Scaphoid Strut	16 (5.2%)
DONOR SITE	n (%)
Antihelix	305 (99.3%)
Conchal Bowl	2 (0.7%)
DONOR SITE COMPLICATIONS	n (%)
Postoperative Bleeding	5 (1.7%)
Non-suppurative Chondritis	3 (1.0%)
Hematoma During Reconstruction	1 (0.3%)



Clinical photograph of harvested antihelical cartilage graft. Skin hooks have been used to increase visualization of the donor site.

015

TITLE: **Evaluation for Residual Tumor of Mohs Micrographic Specimens of Clinically Resolved Preoperative Biopsy Sites**

AUTHORS: *Soonyou Kwon, MD[1]; Hugh M. Gloster, Jr., MD[1]*

INSTITUTION: 1. Dermatology, University of Cincinnati, Cincinnati, OH, United States

PURPOSE: To examine Mohs specimens for microscopic evidence of residual tumor in clinically resolved preoperative biopsy sites. Characteristics such as age of the patient, type of tumor, location of the biopsy site, and size of the Mohs specimen were also collected. The implication of the study impacts the need for Mohs micrographic surgery after apparent clinical resolution following a preoperative biopsy.

DESIGN: Prospective case series of 19 patients with previous biopsy sites that appeared clinically resolved were further evaluated. The scar was excised with 1-2mm margins using the Mohs technique. Six micron sections were cut through the whole specimen to determine whether any residual tumor was present in the preoperative biopsy site.

SUMMARY: Nineteen patients presented for Mohs procedure with a faint biopsy scar from February 2011 to December 2011. The average mean age of the patients was 65 years old. Initial biopsy reports were read as squamous cell carcinoma in situ (SCCIS) in 9/19 patients, superficial SCC in 2/19 patients, SCC in 7/19 patients, and basal cell carcinoma (BCC) in 1/19 patients. The locations of the biopsy sites were the head and neck (15/19) and extremities (4/19). The specimen sizes ranged from 0.3 cm to 1.5 cm in diameter. None of the patients had residual tumor found on microscopic examination of Mohs sections (see Table 1).

CONCLUSION: On occasion, patients will present to the Mohs surgeon with only a faint scar at the biopsy site and no clinically apparent residual tumor. On physical examination, there usually is a white or pink faint thin smooth scar at the previous biopsy location. We conducted a prospective trial to determine the incidence of microscopic residual tumor at the biopsy site in the patients in whom no clinical evidence of tumor remains except a small scar. Complete sectioning through the tissue block revealed no residual tumor in all 19 specimens. The majority of the original tumors that clinically appeared to have resolved was SCC (18/19), nine of which were SCCIS. The clinical size of the preoperative biopsy scar was less than 1 cm in 17 out of the 19 cases. In conclusion, when only a small scar remains at the biopsy site without clinical evidence of residual tumor, re-evaluation with a shave biopsy should be considered, especially when the preoperative biopsy reveals SCCIS. This conservative approach will decrease the cost of health care by preventing unnecessary Mohs procedures on small, superficial tumors that resolve after the initial biopsy.

Poster Presentation Summaries

Table 1.

Age of patient (years)	Tumor reported on biopsy	Biopsy site	Mohs specimen size (cm)	Tumor found on step frozen section (Y/N)
65	SCCIS	sole of left foot	1x0.7	N
56	SCCIS	left lower eyelid	1x0.2	N
82	SCC	right nasal tip	0.5x0.4	N
42	SCC	left alar groove	1x0.5	N
52	SCCIS	left temple	1.5x0.5	N
56	SCCIS	right lower eyelid	1x0.5	N
85	SCCIS	right nasal sidewall	1.5 x 0.5	N
80	SCC	left dorsal hand	0.5x0.5	N
55	SCC, superficial type	nasal dorsum	1x0.5	N
75	SCCIS	helix of left ear	0.7x0.5	N
69	SCC, superficial type	right neck	0.5x0.5	N
60	SCCIS	right nasal tip	0.3x0.3	N
83	SCCIS	left lateral forehead	0.7x0.5	N
85	SCC	right dorsal hand	0.7x0.7	N
82	SCC	left dorsal hand	0.7x0.5	N
62	SCC	left nasal tip	1x0.3	N
27	BCC	right lower eyelid	0.5x0.4	N
83	SCCIS	left cheek	0.6x0.4	N
38	SCC	mid philtrum	0.6x0.3	N

SCCIS: Squamous cell carcinoma in situ
SCC: Squamous cell carcinoma
BCC: Basal cell carcinoma

016

TITLE: **Retrospective Evaluation of the Safety of Large Skin Flap and Graft Surgery in the Outpatient Setting**

AUTHORS: *Adam R. Schmitt, BA[1]; Jeremy S. Bordeaux, MD, MPH[2,1]*

INSTITUTIONS: 1. Case Western Reserve University School of Medicine, Cleveland, OH, United States 2. Department of Dermatology, University Hospitals Case Medical Center, Cleveland, OH, United States

PURPOSE: Our objective was to determine the rates of postoperative infection, bleeding, necrosis, and dehiscence in outpatient dermatologic surgery utilizing large flap and graft repairs, and to determine the relationship between these outcomes and defect location, closure type, repair size, and the use of anticoagulants, antiplatelets, or antibiotics.

DESIGN: Charts of patients requiring large flap (≥ 30 sq cm) or graft (≥ 20 sq cm) repair in the University's Department of Dermatology during a 42-month period were reviewed retrospectively. Medications, procedures, and complications were recorded.

SUMMARY: Following the 154 procedures, 40% of patients were prescribed an antibiotic. Risk of infection was 7.1%. Flap repairs that were 70-100 sq cm (odds ratio [OR] = 6.72) were more likely to be infected than all other flaps (P = .031). Postoperative antibiotic use (P = .35) and defect location (overall P = .27) were not significantly associated with infection, though the risk of infection was greater than 13% on the forehead, temple, chest, and lower limb. At the time of surgery, 45% of patients were on one anticoagulant or antiplatelet, and 8% were on two. Anticoagulant or antiplatelet use was not significantly associated with bleeding (P = .57). There were no instances of hemorrhage, and there was a 3.2% risk of hematoma formation. There was a 4.5% risk of necrosis, and a 1.3% risk of dehiscence. Necrosis was not significantly associated with defect location (P = .21) or flap size (P = .11), though partial flap necrosis occurred in 12% of nose defects and in 14% of interpolation/paramedian forehead flap repairs. All complications resolved without sequelae.

CONCLUSION: The risk of complications following large flap and large graft procedures is low. Bleeding risk was not increased with anticoagulant or antiplatelet use, and the risk of infections fell within the accepted rate for clean-contaminated procedures, even without consistent antibiotic use. Larger flaps were associated with a higher infection risk.

017

TITLE: **Skin Cancer in Lung Transplant Recipients**

AUTHORS: *Jenny C. Hu, MD[1]; Rajan Saggar, MD[2]; Rajeev Saggar, MD[2]; Teresa Soriano, MD[1]*

INSTITUTIONS: 1. Division of Dermatology, David Geffen School of Medicine at UCLA, Los Angeles, CA, United States 2. Division of Pulmonary and Critical Care Medicine, David Geffen School of Medicine at UCLA, Los Angeles, CA, United States

PURPOSE: Solid organ transplant recipients are at increased risk of malignancies following transplantation, with non-melanoma skin cancer (NMSC) being the most common malignancy. These patients are particularly at high risk of developing squamous cell carcinoma (SCC), with an incidence of 65-250 times greater than that of the general population. The incidence of SCC appears to correlate with duration of immunosuppressive therapy. Also, SCC is more aggressive and has a higher metastatic rate in transplant recipients. More notably, lung transplant recipients may have a greater risk given their high immunosuppressive regimens and older age at transplantation. To date, there has not been a published study evaluating the incidence of skin cancers in lung transplant recipients. The aim of this study is to examine the incidence of NMSC, identify immunosuppressive risk factors, and evaluate prognosis of lung transplant recipients who develop NMSC.

Poster Presentation Summaries

DESIGN: We retrospectively reviewed medical records of patients who received lung transplantation at our institution from 2000 to 2008.

SUMMARY: A total of 385 patients had received lung transplantation during this period, of which 48 patients (12.5%) developed a total of 363 skin cancers. The skin cancers included 254 SCC (70.0%), 83 SCC in-situ (22.9%), 17 basal cell carcinoma (4.7%), 2 basosquamous carcinomas (0.6%), 5 unspecified NMSC (1.4%), 1 melanoma in-situ (0.3%), and 1 spindle cell carcinoma (0.3%). Of the SCCs, 16 demonstrated perineural invasion (4.4%) and 10 (2.8%) were associated with metastasis to skin, lymph nodes, or lungs. A total of 108 (29.8%) SCC or SCC in-situ lesions were located on high-risk locations including the scalp, ear, and lip. Mean time from transplantation to first skin cancer was 33.2 months.

CONCLUSION: It is important for dermatologists and dermatologic surgeons to be vigilant about the increased risk of NMSC in lung transplant recipients and counsel these patients on sun protection, regular skin exams, and prompt surgical treatment.

018

TITLE: **Pain Control by a Two-step Irradiance Schedule Photodynamic Therapy of Basal Cell Carcinoma**

AUTHORS: *Joseph P. Housel, MD[1,2]; Nathalie C. Zeitouni, MD[2,1]*

INSTITUTIONS: 1. Dermatology, University at Buffalo School of Medicine, Amherst, NY, United States 2. Dermatology, Roswell Park Cancer Institute, Buffalo, NY, United States

PURPOSE: Photodynamic therapy (PDT) with aminolevulinic acid (ALA) is a useful treatment for selected basal cell carcinomas (BCC) but patients can experience pain or discomfort during the session. In an earlier study, a two-step irradiance schedule for the treatment of BCC was devised in an attempt to decrease treatment related pain. That study was restricted to BCC's of no more than 5-20 mm in diameter and to two lesions per patient. BCC lesions were illuminated at varying low irradiances (10-60 mW/cm2) until 90% of PpIX was photobleached, thereafter increasing the irradiance to 150mW/cm2 for a total light dose of 200 J/cm2. The prior study revealed three major results: 1) photobleaching rates were enhanced under low irradiance, indicating more efficient PDT, 2)treatment outcomes were comparable to continuous 150mW/cm2 treatment, 3) illumination at irradiances below 50mW/cm2 caused no or minimal pain and, when preceded by low irradiance, 150 mW/cm2 likewise caused no or minimal pain. In our updated study we treated multiple or large BCC's with the two step irradiance PDT approach and to assess both pain and clinical outcome in these patients.

DESIGN: An open, uncontrolled study was conducted on patients with either superficial or nodular basal cell carcinomas. ALA was applied to each lesion followed by four irradiances: 30, 40, 50, and 150mW/cm2. PDT was delivered in two parts: the initial therapy was delivered at the 30, 40, or 50mW/cm2 for a total of 20J/cm2 which was established as the irradiance where ~80-90 ± 10% of the PpIX fluorescence contribution in the lesions bleached. When this point was reached the irradiance was continued at 150mW/cm2 until 200-300 J/cm2 was delivered. Each area was exposed to visible red light at a continuous wavelength of 632.8 ±3 nm. Pain was assessed using a visual analog 11-point pain scale (VAS) in which 0 represents no pain, 10 represents unbearable distress. A VAS of 4 represents moderate pain and would require an intervention including anesthetic or other pain relieving measure. If pain was VAS≥4, the irradiance was lowered by 10mW/cm2 and/or the lesion was injected with 1% lidocaine without epinephrine. When the irradiance was changed to 150 mW/cm2 pain was assessed as prior. Patients were evaluated at ~6 months, then approximately every 6 months thereafter.

SUMMARY: Nine patients: 7 men and 2 women, ranging in age from 18-71(mean 48, median 53) with a total of 73 distinct BCC's, 39 nBCC and 34 sBCC were treated. All patients received at least one treatment with one receiving a separate treatment for other bcc's. The predominant location of lesions was the trunk with thirty four, followed by the head and neck with twenty one, lower extremities with ten, and upper extremities with eight. Twenty four sBCC's were evaluable with twenty one reported as CR (87.5%), three as PR (12.5%) at six month follow-up. Of the thirty nine nBCC's, fifteen were reported as CR (38%), twenty as PR (51%), three as MR (8%) and 1 as CF (3%) at six month follow-up. 66% of patients had multiple areas treated in one treatment session. Average number of lesions treated per treatment session was 7.3. Average VAS was 1.89. 52 lesions fell in the 1-2 cm field size, 18 in the 2-3cm size, and 3 in the 3-4 cm size. As a predictor of pain, individual area treated was not significant nor was total treatment area. Number of lesions treated was not a strong predictor of pain nor were the individual sizes. Location was the strongest predictor, with areas producing the highest pain, with the least subcutaneous tissue (i.e. pretibia/temple). ≤ 40mW/cm2 was the starting irradiance for all but one treatment which was started at 50mW/cm2 for 2.5 minutes until pain reached 3/10 at which point the irradiance was adjusted to 40mW/cm2 with pain dropping to 1/10. One patient had a lesion on the nose started at 30mW/cm2 for 4 j/cm2 with no pain, so irradiance was increased to 40 mw/cm2 with patient experiencing 7/10 pain. The irradiance was decreased to 30mW/cm2 with pain dropping to 5/10 requiring lidocaine. Of those treatments that were started at 40mW/cm2, only two patients required downward adjustment of the irradiance. After the initial 20mW/cm2 was delivered, the irradiance was increased to 150mW/cm2 for the remainder of the treatment. Only five lesions had a VAS increase to a level ≥4, max level 5/10 with no lidocaine required. All patients were able to complete the treatments as planned. No adverse events occurred and patients tolerated the treatment.

CONCLUSION: Photodynamic therapy with topical aminolevulinic acid using a two-step irradiance schedule with ~40mW/cm2 for 20

J/cm2 then 150mW/cm2 for the remainder of the treatment allowed for minimal patient discomfort with no interventions required to complete the full treatment. Similar treatment results were achieved compared to continuous 150mW/cm2.

020

TITLE: Asymmetric Sectioning of Mohs Micrographic Surgery Specimens

AUTHORS: *Hilary C. Reich, MD[1]; Sarah E. Schram, MD[1]; Theresa L. Ray, MD[1]; Peter K. Lee, MD, PhD[1]; Stephanie Wallschlaeger, HT[1]; Anna Deem, HT[1]*

INSTITUTION: 1. Dermatology, University of Minnesota, Minneapolis, MN, United States

PURPOSE: Evaluation of an accurate en-face surgical margin is a mandatory component of Mohs micrographic surgery. Just as tears, incurling, or folding of the epidermal edge of a specimen prior to freezing and cutting may lead to false positives, so may cutting of a frozen sample through the bulk of a tumor if proper imbedding, freezing, or cutting methods are not employed1,2. Single-section tissue preparation has been proposed as a method of reducing false positives3, however this process can be challenging, particularly when specimens are large. We propose an alternative method: a simple, fast, and novel sectioning technique using asymmetric sectioning to avoid the tumor bulk. This may lead to reduced tissue folding during processing and cutting, with fewer false positive margins overall. Additionally, tissue orientation is easily maintained with asymmetric sections.

DESIGN: Surgical specimens are obtained in the standard fashion for Mohs micrographic surgery. Rather than sectioning tissue layers into two symmetric semicircular pieces, as is traditionally done, we section asymmetrically to avoid cutting through the obvious tumor bulk. The tissue is divided into two sections: one comprising approximately two-thirds of the total layer and containing the visible tumor, and the other remaining one-third of the layer. The remainder of the tissue processing is performed in the usual fashion.

SUMMARY: The asymmetric sectioning technique has been used on numerous sections. We have found it to be a quick and easy method of tissue preparation. Our histotechnicians have found the specimens easy to process. Examination of specimens sectioned this way reveals a better representation of the true deep margin, visible in a single microscopic field.

CONCLUSION: Asymmetric sectioning of Mohs surgery specimens is a quick and easy method of tissue preparation that may lead to fewer false positive results and may be a helpful tool in maintaining orientation of tissue sample prior to processing. Future study goals include a randomized trial to assess false positive rates between symmetric and asymmetric sectioning.

References

1. Kannan RY, Tan EK, Freedlander E. Minimising false positive margins in BCC excision: point of technique. J Plast Reconstr Aesthet Surg. 2008 Sep;61(9):1072.

2. Bouzari N, Olbricht S. Histologic pitfalls in the Mohs technique. Dermatol Clin. 2011 Apr;29(2):261-72, ix. Review.

3. Randle HW, Zitelli J, Brodland DG, Roenigk RK. Histologic preparation for Mohs micrographic surgery. The single section method. J Dermatol Surg Oncol. 1993 Jun;19(6):522-4.*

021

TITLE: Controlling Sharps Using a Cost-effective, Reusable Magnet

AUTHORS: *Anne J. Goldsberry, MD[1]; Rae Jean Broderick, RN[2]; Ross M. Levy, MD[2]*

INSTITUTIONS: 1. Department of Dermatology, Northwestern University, Feinberg School of Medicine, Chicago, IL, United States
2. Dermatology Surgery Unit, Division of Dermatology, NorthShore University Health System, Skokie, IL, United States

PURPOSE: We report the novel use of a small, multiple-use magnet as a superior method for collecting sharps.

DESIGN: The annual frequency of sharps injuries is approximately 600,000-800,000. Wicker et al analyzed the incidence of sharps injuries among dermatologists and their staff and found that nearly 60% of physicians and 27% of nurses had endured a needlestick in the prior 12 months. In dermatology surgery, sharps injuries can result from scalpel blades, skin hooks, and needles, with suture needles being the most common etiology of sharps injuries. Residency programs report especially high rates of needlesticks among trainees. Preventing these types of injuries is of critical importance. Approximately 1.7 % of patients in the United States have HIV, Hepatitis C or Hepatitis B. The estimated rate of transmission for individuals who are stuck with a large bore needle from a patient with HIV is 0.3%, with Hepatitis C is 1.8% and with Hepatitis B is 6-30%.

Dermatology surgery provides challenges to preventing needlestick injuries including limited surgical space, a mobile instrument tray, multiple practitioners (physicians, residents, physicians assistants, and nurses) using the same instruments, and revisiting the surgical tray numerous times during a procedure. As a consequence, Mohs surgeons have been innovative in exploring different methods to segregate and dispose of sharps in order to prevent injuries. These techniques have included the use of commercial needle counters, Petri dishes, glass cups, and foam sponges.

The optimal technique for managing sharps requires a method that is compatible with the limited space available, stable during the movement of adjacent instruments, able to be sterilized, and cost effective.

Poster Presentation Summaries

SUMMARY: Magnets are purchased at a national retail crafts store for approximately $5 per 6 magnets (83 cents per unit). They are approximately 1 cm in diameter allowing them to fit easily on the try with other instruments. During the surgical procedure, the magnet is placed in the right hand corner of the tray and is used to control suture needles between uses. The magnet allows easy reuse of the suture without dulling of the needle. It can also be used to manage surgical blades or other important metal objects. Once the procedure has concluded, the magnet is easily transported to the sharps disposal container, and they are removed ensuring appropriate sharps control. In addition, if any sharps fall on the floor, the magnet can facilitate finding and disposing of them safely. The magnets are then re-autoclaved for multiple uses.

CONCLUSION: The use of small, multiuse magnets provides dermatologic surgeons with a safe, cost effective method of controlling sharps that does not interfere with the surgical tray or compromise equipment or technique.

022

TITLE: Squamous Cell Carcinoma In Situ of the Ear

AUTHORS: *Kachiu C. Lee, MD[1]; H. William Higgins, II, MD[1]; Newsha Lajevardi, BA, MS[1]; Antonio P. Cruz, MD[1]; Raymond G. Dufresne, Jr., MD[1]*

INSTITUTION: 1. Dermatology, Brown University, Providence, RI, United States

PURPOSE: Mohs micrographic surgery (MMS) is a commonly used treatment modality for squamous cell carcinoma in situ (SCCIS). The ear is a critical location for tissue conservation. Progression to an invasive squamous cell carcinoma on the ear has significant morbidity and risk to the patient. A large series of patients with SCCIS of the external ear is reviewed.

DESIGN: We performed a retrospective 6-year review (2005 to 2011) of 173 consecutive patients with confirmed cases of SCCIS of the external ear. All cases were referred to an academic center for Mohs micrographic surgery. Data on the following were collected: gender, age, location, primary versus recurrent, initial area, sub-clinical extension (defect size and number of Mohs layers), and type of repair.

SUMMARY: In a retrospective, 6 year review of primary SCCIS of the ear, 173 cases referred for surgery at an academic Mohs practice were identified over a period spanning 2005-2011. The patient ages ranged from 51-94 with a mean of 74 years. There was a significant preponderance of males corresponding to 94% of all the patients ($p<.01$). More cases occurred on the left ear (93) than the right (73) but this did not reach statistical significance. 92% of patients were identified as having primary SCCIS with the remaining 8% defined as recurrent following attempted treatment with cryosurgery. The tumors designated as recurrent SCCIS (n=11) were exclusively observed in male patients and were independently associated with a larger final defect size ($p=0.01$). Of note, recurrent tumors also had a larger mean initial area of 2.2 cm2 vs. primary tumors with a mean of 1.15 cm2 ($p=.05$). Recurrent SCCIS treated with MMS overall required more layers for extirpation when compared to primary tumors (2 vs. 1.61, $p= .059$). Location on the ear, sex, and age did not have a significant influence on the number of layers required. Notably, larger initial area was independently associated with older age ($p<.01$). Regarding closure, the complexity of repair (higher complexity = grafts/flaps) was independently associated with more layers ($p<.01$), larger initial area ($p=.012$), and larger final area ($p=.02$). Gender did not affect repair type.

CONCLUSION: The findings of our study show that SCCIS appears to be a predominantly male disease. Tumors designated as recurrent were associated with greater significant subclinical spread of tumor. Notably, they were found to require a significantly larger initial Mohs layer ($p=.05$) and to have a larger final defect size ($p=0.01$). Recurrent tumors did require more layers, however, this value approached, but did not reach statistical significance. Even primary tumors on average required 1.6 Mohs layers with approximate 2-3 mm margins, suggesting the presence of subclinical spread regardless of recurrence. Thus, Mohs surgery is valuable in delineating the sub-clinical spread of this tumor type in this location. Tissue conservation and a superior definition of tumor margins is a benefit in a smaller tumor when a surgical option is elected. In addition, cases requiring more layers and having larger initial/final defect size were significantly more likely to require more complex repairs (flap or grafts), which further substantiates the use of MMS in these cases.

023

TITLE: Mohs Micrographic Surgery for Atypical Fibroxanthoma: A Retrospective Review of 68 Cases

AUTHORS: *Andrew M. Swanson, MD[1]; Juliet L. Gunkel, MD[1]; B. Jack Longley, MD[1]; Stephen N. Snow, MD[1]*

INSTITUTION: 1. Department of Dermatology, University of Wisconsin - Madison, Madison, WI, United States

PURPOSE: Atypical fibroxanthoma (AFX) is an uncommon spindle cell neoplasm that typically develops on the sun-exposed areas of elderly white men. It was originally described in 1963 by Helwig as a low-grade dermal tumor. Since then, the potential for malignant behavior has been debated in the literature with AFX being described as a benign tumor, a reactive process or "pseudosarcoma", and a potentially aggressive tumor with the possibility of metastasis and even death. It is currently regarded as a tumor of intermediate malignant potential. Recurrence rates vary widely based on the treatment method and range from 0-16%. Because of increasing recognition of the malignant potential of AFX, it is being treated with Mohs micrographic surgery (MMS) with increasing frequency. Because of the recent adoption of MMS in the treatment of this uncommon tumor there are few large studies of recurrence rates with this technique.

Poster Presentation Summaries

DESIGN: This is a retrospective chart review of all patients with AFX who were treated by MMS between 1984 and 2011 in the Mohs surgery clinic of our institution. Patients were classified as having AFX based on clinical-pathologic correlation at the time of their initial surgery.

SUMMARY: Between 1984 and 2011 there were 64 patients with biopsy-confirmed diagnoses of AFX treated with MMS. Of the 64 patients, 50 (78%) were male. Four patients were found to have a second primary AFX, for a total of 68 tumors. Of the 68 tumors, 65 (96%) were on the head and neck, 2 (3%) were on the upper extremity, and 1 (1%) was on the trunk. Four of the 68 tumors recurred after their initial treatment with MMS for an overall recurrence rate of 5.8%. Of the recurrent tumors, all were located on the head and neck with one on the frontal scalp, one on the forehead, one on the ear, and one on the cheek. Two of the recurrent tumors had multiple recurrences with one extending to bone on the second recurrence over 5 years. This patient also had a history of an eccrine carcinoma with spread to lymph nodes that had been treated with extensive radiation 5 years prior to the development of his AFX. Clear margins were very difficult to obtain in this case as atypical radiation fibroblasts could not be definitively distinguished from individual cells from the known AFX. There were no cases of metastatic AFX.

CONCLUSION: To the best of our knowledge, this is the largest reported case series of AFX treated with MMS. Similar to previous studies, our cases were predominantly on sun exposed areas of elderly men. The observed recurrence rate of 5.8% illustrates the challenge of completely clearing these tumors despite complete histologic analysis of margins. Specifically, patients with a history of radiation therapy may have tumors that are difficult to differentiate from surrounding skin and radiation fibroblasts.

024

TITLE: **Use of Full Thickness Skin Grafts to Repair Lower Eyelid Defects Involving the Eyelid Rim**

AUTHORS: *Lixia Z. Ellis, MD, PhD[1]; Misha D. Miller, MD[1]; Renata Prado, MD[1]; Mariah R. Brown, MD[1]; J. Ramsey Mellette, Jr., MD[1]*

INSTITUTION: 1. Dermatology, University of Colorado, Denver, CO, United States

PURPOSE: The reconstruction of the lower eyelid defects following Mohs micrographic surgery can be challenging given the complex anatomy of the eyelids and risk of ectropion. When the eyelid rim is involved, often wedge excisions with complex repairs or advancement flaps are used. Because there is usually redundant skin at the upper eyelid, and that there is perfect match of color, texture, thickness and sebaceous qualify between upper and lower eyelid skin, we prefer to repair lower eyelid defects with upper eyelid full thickness skin grafts. If the eyelid rim involvement is small, we have found that this full thickness graft provides excellent functional and cosmetic results.

DESIGN: We have repaired lower eyelid defects involving the eyelid rim in 10 patients with upper eyelid full thickness grafts with good functional and cosmetic results without causing ectropion. After a lower eyelid tumor is removed with Mohs micrographic surgery, the defect is outlined with a sterile marking pen. A template of non-adherent gauze is pressed against the defect, and the inked outline on the gauze is used to create the template. The template is then used to mark the ipsilateral upper eyelid donor site, and the graft is incised and harvested following local anesthesia of the donor site. The graft is oversized relative to the defect size in order to avoid ectropion. The graft is trimmed of underlying fat, and sutured into the recipient bed using 6-0 Ethibond suture. The donor site is usually closed primarily.

SUMMARY: In this report, we describe our experience of repairing lower eyelid Mohs defects with ipsilateral upper eyelid full thickness skin grafts, even when the eyelid rim is involved.

CONCLUSION: Using upper eyelid full thickness skin grafts to repair lower eyelid defects not only provides cosmetically optimal result because of perfect match of skin quality, but also is successful in preventing ectropion. The partial involvement of the eyelid rim should not be considered a contraindication for the use of full thickness skin graft in this location.

025

TITLE: **Diagonal Tarsal Suture Technique Sine Marginal Sutures for Primary Lid Closure**

AUTHORS: *Andrea Willey, MD[1,2]; Richard H. Caesar, MA, MB, Bchir, FRCOphth[3]*

INSTITUTIONS: 1. Solano Dermatology Associates, Sacramento, CA, United States 2. University of California, Davis, Sacramento, CA, United States 3. Cheltenham General Hospital, Cheltenham, Gloucestershire, United Kingdom

PURPOSE: Repair of marginal defects remains a fundamental technique in ocular reconstruction for primary wound closure or as part of more complex reconstructions. Precise apposition of the tarsal plates and meticulous alignment of the lid margins is essential to ensure a seamless repair and avoid disfiguring notching of the lid margin. Traditional methods of lid closure involve a three layered technique that includes marginal sutures to align the lid margin. Recent modifications have suggested various approaches to minimize the disadvantages associated with marginal sutures, including the potential for corneal irritation or abrasion. We present a simple and reliable technique for primary lid closure that provides precise and secure apposition of the tarsus while avoiding marginal sutures altogether.

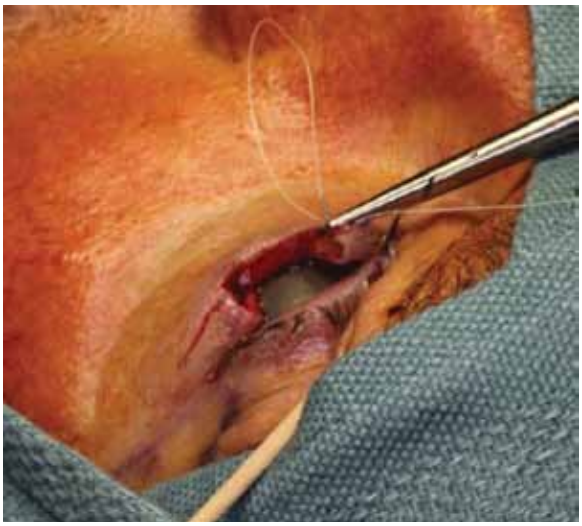
DESIGN: A pentagonal defect is created to minimize tension on the lid margin. The key tarsal suture is placed so that it enters the tarsus approximately 2mm inferior and medial to the tarsal edge, extends diagonally across the tarsus, and exits just inside the conjunctival border at the uppermost point of the posterior tarsal

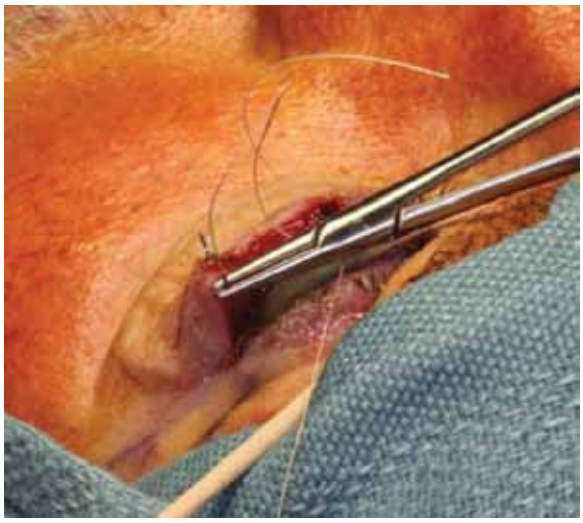
Poster Presentation Summaries

plate. The exit point of this tarsal suture is matched precisely to the entry point on the opposing tarsal margin, followed by the diagonal suture pattern and corresponding exit point. A second tarsal suture is then placed in the traditional manner parallel to the lid margin just below the key diagonal suture. The anterior lamella is then closed using simple continuous sutures that begin just inferior to the lash line.

SUMMARY: The key diagonal tarsal suture soundly apposes the tarsal plate with ample security so that there is precise alignment along the x, y, and z axes and eliminates the potential for notching as well a trichiasis that may result from twisting of the lid margin under tension. Placement of the apex of the key diagonal suture at the uppermost point of the posterior tarsal plate allows for an exacting alignment of the lid margin and lash line, obviating the need for margin sutures.

CONCLUSION: The diagonal tarsal suture technique without marginal sutures is a simple "first time, every time" technique that precisely aligns and firmly apposes the lid margins while avoiding the need for marginal sutures that can abrade the cornea and be bothersome to patients. The technique can be applied to primary lid closures and more complex reconstructions, and can be readily learned by less experienced as well as more advanced periocular reconstructive surgeons.





026

TITLE: **Incidence and Treatment of Non-melanoma Skin Cancer in Ontario, Canada**

AUTHORS: *Joseph Doumit, MD[1]; Julie Lacroix, MD[1]; Megan Collie[2]; Ryan Kroll[2]; Adam J. Mamelak, MD[1,3]*

INSTITUTIONS: 1. Dermatology, University of Ottawa, Ottawa, ON, Canada 2. Queen's University School of Medicine, Kingston, ON, Canada 3. Sanova Dermatology, Austin, TX, United States

PURPOSE: There is currently no provincial tumor registry for non-melanoma skin cancer (NMSC) making it difficult to track the incidence and treatment of this disease in Ontario. Within the context of a publically-funded single payer provincial healthcare system, the absence of this data makes health care planning and resource allocation to the appropriate medical specialties exceedingly difficult. The objectives of this study are: (1) to estimate the incidence of NMSC in Ontario; (2) to identify the primary medical specialties treating this disease; and (3) to determine the therapeutic modalities utilized in treating these cancers.

DESIGN: Billing claims associated with the NMSC diagnosis code '173' submitted to and paid by the Ontario Health Insurance Program between 2003 and 2009 were examined. The incidence and rate of increase of NMSC claims submitted were calculated. The number of E/M procedure codes, including skin biopsy, electrodessication and curettage (EDC), excision, intraoperative frozen section, radiation therapy, and Mohs surgery, submitted each year were analysed and stratified by the associated medical specialty.

SUMMARY: The number of NMSC claims submitted increased by 36% between 2003 and 2009, with the total number of claims rising by over 100,000 in this time period. Increases in the number of biopsies (22%), EDC (21%), and surgeries (55%) were

similarly observed, with the greatest increases seen in the number of radiation therapies (2.8 x) and Mohs surgeries (over 10 x) performed. Dermatologists were responsible for the majority of skin biopsy and EDC procedures, followed by family medicine and plastic surgery. Plastic surgery was responsible for the majority of surgical excisions during this time period, followed by dermatology.

CONCLUSION: The number of reimbursed NMSC claims increased at a rate of approximately 6% per year between 2003 and 2009. The majority of NMSC claims were submitted by Dermatology. Surgery was the most common means for treating NMSC in the province. The proportion of excisions performed by Dermatologists increased from 2003 (14%) to 2009 (21%). Despite the significant increase, the number of Mohs codes submitted in 2009 only represents 1.1% of all NMSC claims. A decrease in EDC procedures between 2008 and 2009 might be reflective of the increase use of surgical excision by dermatologists and/or the greater accessibility to Mohs surgery in the province.

027

TITLE: **Novel Pedicle Design Enhances Utility of Tunneled Island Pedicle Flap for Single-staged Repair of Auricular Defects**

AUTHORS: *Nisha Desai, MD[1]; Hakeem Sam, MD, PhD[1]*

INSTITUTION: 1. Department of Dermatology, University of Pittsburgh Medical Center, Pittsburgh, PA, United States

PURPOSE: Reconstruction of auricular defects, especially those involving cartilage devoid of perichondrium, can be challenging. The tunneled island pedicle or "flip-flop" island pedicle flap has been described to repair small to moderate-sized defects of the ear, most commonly involving the conchal bowl and less commonly the scapha, earlobe, antitragus, antihelix and external auditory meatus. Flap movement has been referred to as rotation or revolving door such that the anterior portion of the flap ends up at the posterior border of the wound being repaired. What these flaps have in common is a short, central, vertically based pedicle centered on the post auricular sulcus or posterior ear. These short pedicles limit movement of the flap to repairing of defects located on the opposite side of the flap, mainly the conchal bowl, but much less applicable to repairing defects elsewhere on the ear. We introduce a novel pedicle design for repairing larger defects involving the scapha, antihelix and helix. This pedicle design extends the reach of the flap, making it amenable for use in additional areas of the ear.

DESIGN: A 44 year-old healthy Caucasian man presented with a basal cell carcinoma involving the scapha, antihelix and helix. Mohs micrographic surgery was performed to obtain clear tumor margins. The final defect measured 3.5cm x 1.5cm (Figure 1). It involved the inferior portion of the scapha, the majority of the antihelix and a portion of the helix. The tunneled flap was marked out centered on the postauricular mastoid region. A circumferential peripheral incision of the flap to the level of the superficial subcutis was made. Next, a horizontally based pedicle, with pedicle width approximately one-third the length of the flap was created by undermining in the superficial subcutis and deep fascial plane above and below the pedicle respectively . When complete, the pedicle ran horizontally from the center of the flap to a base at the postauricular sulcus. Undermining in the superficial subcutis was extended superiorly behind the lateral conchal bowl, creating a tunnel opening at the sulcus between the helix and antihelix where cartilage was missing in the defect. The flap was mobilized and tunneled into place with the pedicle movement mimicking the turning of a book page from a horizontal to vertical position (Figure 1). The secondary defect was closed in a side-to-side fashion. No long term complications were noted.

SUMMARY: After carefully evaluating various options, a postauricular tunneled island pedicle flap was performed in a single-stage reconstruction. Our novel pedicle design introduces a technique to repair large defects, in our case involving the scapha, anti-helix and helix. The flap template was centered over the mastoid, unlike the traditional design of centering the flap over the postauricular sulcus. Further, our lateral pedicle design differs from the previously described central, vertical pedicle. Previously, the tunneled flaps on the ear were created through the conchal bowl itself. We tunneled our flap in the subcutaneous plane behind the conchal bowl through a window between the helix and anti-helix. The flap pedicle essentially lifts up like turning the page of a book from horizontal to vertical, and the anterior portion of the flap ends up at the anterior border of the wound being repaired. This flap movement differs from the revolving door motion of the classic tunneled island pedicle flaps.

CONCLUSION: The lateral pedicle design of the post-auricular tunneled island flap significantly enhances the reach of this flap, making it amenable for a single-staged repair of relatively large defects of the ear involving the helix, antihelix and scapha. Additional studies are needed in order to better define the full limits and applications of this flap.

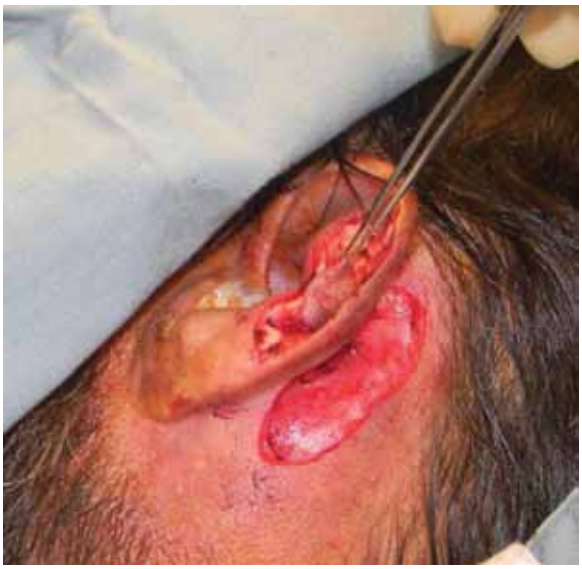


Figure 1.

Poster Presentation Summaries

028

TITLE: **A Histopathologic Frozen Section Digital Database for the Mohs Surgeon in Training**

AUTHORS: *Mark F. Suchter, MD[1,2]; Christine E. Cabell, MD[1,2]; Victor J. Marks, MD[2]*

INSTITUTIONS: 1. Procedural Dermatology, Geisinger Wyoming Valley Medical Center, Wilkes-Barre, PA, United States 2. Procedural Dermatology, Geisinger Medical Center, Danville, PA, United States

PURPOSE: Early in training, interpreting malignant versus non-malignant pathology via frozen sections is often a source of confusion, which can lead to unnecessary surgery, increased patient adverse effects, or tumor recurrence. The purpose of this project is to create a histopathologic frozen section digital database which may improve the diagnostic accuracy of the Mohs surgeon in training through self study.

DESIGN: Digital images of Mohs frozen sections from various benign and malignant tumors, variants of normal pathology, different tissue stains, or interesting incidental findings were captured and uploaded to a database. After opening the database and viewing an uploaded digital slide, a specific question was asked. This question/answer format was chosen to focus on more specific learning objectives. Some examples of frozen section digital images include erector pili muscle mimicking squamous cell carcinoma, benign follicular hamartoma mimicking basal cell carcinoma, subtypes of basal cell and squamous cell carcinomas, lentigo maligna stained with MART-1 immunostain, basal cell carcinoma stained with toluidine blue, and electrodessication artifact. The digital database can easily be accessed from any computer in the dermatology clinic.

SUMMARY: A histopathologic frozen section digital database was created to help increase the familiarity with less common histologic findings which may lead to confusion for the Mohs surgeon in training. We feel that this database may improve the diagnostic accuracy of the Mohs surgeon in training.

CONCLUSION: Histopathologic diagnostic accuracy of the Mohs surgeon in training may be improved by the use of a frozen section digital database. Further studies with future Mohs fellows will help answer this question.

029

TITLE: **A Comparison of Wound Reactivity to Two Common Postoperative Ointments**

AUTHORS: *Adisbeth Morales-Burgos, MD[1]; Michael P. Loosemore, MD[1]; Leonard H. Goldberg, MD[1]*

INSTITUTION: 1. Methodist Hospital, Houston, TX, United States

PURPOSE: Topical ointments are commonly used for postoperative wound care after dermatologic procedures. A moist environment allows for more rapid re-epithelialization and wound healing. Aquaphor healing ointment (AHO; Beiersdorf Inc, Wilton, CT) and petroleum jelly (Vaseline, Unilever) are reparative moisturizers commonly utilized by dermatologists for postoperative wound care. While these ointments have beneficial properties for wound healing, they also have the potential to cause redness and swelling likely as the result of a contact dermatitis. Aquaphor is known to contain lanolin which may be the cause of redness on some wounds.

We have compared the reaction of primarily closed wounds to the application of AHO, Vaseline petroleum jelly, or no-ointment in patients during the postoperative period.

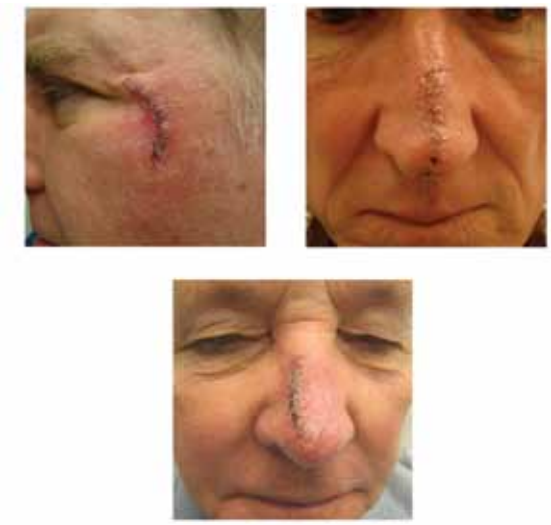
DESIGN: A total of 83 patients who underwent Mohs surgery on the head and neck with primary closure of the defect were randomized to use either AHO, Vaseline, or no-ointment (27, 32, and 17 patients, respectively) during the postoperative wound care period. The patients were evaluated for erythema, edema and crusting/scabbing of the wound at an average of 10.9 days postoperatively. No antibiotics were administered to the patients and no infections related to the surgery were observed.

SUMMARY: Clinical assessment of the wounds treated with AHO showed a 52% incidence of redness at the wound site, with 33% of patients showing redness and swelling. The Vaseline cohort had a 12% incidence of redness with 9% having redness and swelling. Patients who did not apply ointment to their wound also manifested redness in 12%, with redness and swelling occurring in 6%.

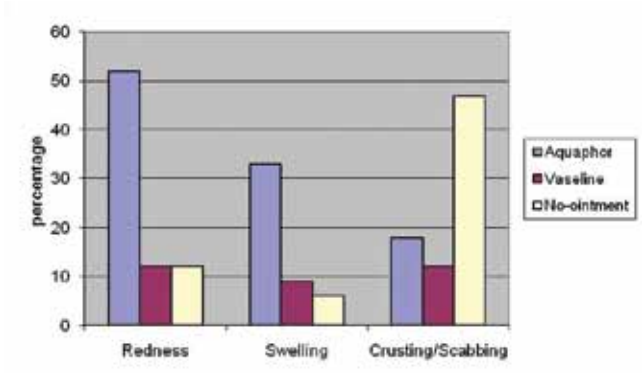
AHO resulted in significantly more erythema and swelling than Vaseline or no-ointment ($p \leq 0.000263$ and $p \leq 0.001229$ respectively). Vaseline did not cause significant redness or swelling when compared to the use of no-ointment ($p \leq 0.392211$). However, crusting and scabbing of the wounds were significantly more common in the no-ointment group when compared to Vaseline or AHO ($p \leq 0.009904$ and $p \leq 0.030535$, respectively).

CONCLUSION: As the ointment with the lowest incidence of redness and swelling, Vaseline is superior to Aquaphor for postoperative wound care. In addition, both ointments resulted in significantly less wound crusting than the no-ointment group. The ability of Vaseline to create a moist and favorable environment for wound healing, while avoiding the increased tissue reactivity seen with Aquaphor, makes it the superior choice for postoperative wound care.

Poster Presentation Summaries



Patients using Aquaphor healing ointment, Vaseline petroleum jelly, and no-ointment for postoperative wound care (left upper corner, right upper corner and bottom, respectively)



030

TITLE: **Profile of Female Mohs Patients**

AUTHORS: *Kachiu C. Lee, MD[1]; H. William Higgins, II, MD[1]; Ugur Uslu, BA[1]; Raymond G. Dufresne, Jr., MD[1]; Antonio P. Cruz, MD[1]*

INSTITUTION: 1. Dermatology, Brown University, Providence, RI, United States

PURPOSE: The aim is to better define differences in male and female Mohs patients by evaluating characteristics such as age, skin cancer type, and repair selection at an academic Mohs micrographic surgery (MMS) center.

DESIGN: A retrospective review of over 1,600 Mohs patients was performed. Data on the following were collected and analyzed: patient demographics (gender, age), tumor type/subtype, anatomic site of the tumor, primary versus recurrent tumors, initial area, sub-clinical extension (defect size and number of Mohs layers), and repair method.

SUMMARY: 540 of these patients were female and 1,153 patients were male. Data analysis revealed that the female population was younger on average (65.88 vs. 70.55, p<.01). There was no significant difference in primary vs. recurrent tumors. Differences in tumor type/subtype were as follows: males had a significantly higher number basal cell and squamous cell carcinomas (p<.001); females were more likely to have superficial basal cell carcinomas (p=.03), whereas males were more likely to have aggressive tumors (p=.03). Regarding location, women had a significantly larger number of truncal (all locations, excluding head/neck) lesions treated by Mohs surgery (p<.001). Analysis of repair type revealed that women were much more likely to have plastics repair (p<.001), whereas men had a much higher proportion of lesions treated by second intent (p<.001). Finally, women had a significantly smaller initial lesion size (0.85 vs. 1.09cm2, p<.001), however, there was no significant difference in the number of layers.

CONCLUSION: This study may suggest that female patients may have earlier detection and treatment of non-melanoma skin cancers. Female patients were significantly younger and had a smaller initial lesion size. There were also found to have less invasive tumors (females had significantly more superficial BCC's, men had more aggressive BCC's). Our data may also suggest that female patients have a higher concern for cosmesis as they were more likely to have repair by plastic surgery, less likely to have repair by second intent, and a significantly higher proportion of lesions on the trunk treated by Mohs micrographic surgery.

031

TITLE: **Basal Cell Carcinoma of the Upper Lip**

AUTHORS: *H. William Higgins, II, MD[1]; Kachiu C. Lee, MD[1]; Newsha Lajevardi, BA, MS[1]; Antonio P. Cruz, MD[1]; Raymond G. Dufresne, Jr., MD[1]*

INSTITUTION: 1. Dermatology, Brown University, Providence, RI, United States

PURPOSE: There is currently a lack of U.S-based case series on the characteristics of basal cell carcinoma (BCC) of the upper lip treated by Mohs micrographic surgery (MMS). Historically, such non-melanoma skin cancers on the lip are more common in women and have been associated with poorer quality of life outcomes when compared to similar cancers in other anatomic locations. The aim is to report the clinical findings of a large series of patients with basal cell carcinoma of the upper lip treated with MMS at an academic facility from 2005 to 2011.

DESIGN: A retrospective 6-year review (October 2005 to October 2011) of 281 consecutive patients with confirmed cases of basal cell carcinoma of the upper cutaneous lip and treated at an academic Mohs practice was performed. Data was analyzed according to age, gender, histological subtype, clinical size of tumor, sub-clinical extension (defect size and number of Mohs layers), and type of repair.

SUMMARY: 281 cases were identified over a period spanning 2005-2011. All patients were Caucasians (skin phototypes I, II, and III). 55% of patients were female and 45% were male with no

Poster Presentation Summaries

statistically significant difference in gender. The mean age of our patients was 76.64 (range, 31-94 years). 10% were treated for recurrent tumors. The predominant histological subtypes were as follows: nodular (186 cases), infiltrative (39 cases), and other (58 cases). Perineural invasion was not observed in any case. Overall, males were more likely to present with a larger initial defect ($p<.01$) as well as a larger final defect ($p<.03$) when compared to their female counterparts. Gender was not associated with the number of Mohs layers, histological subtype or the nature of tumor (primary vs. recurrent). Regarding histological subtype, infiltrative tumors were found to present with larger initial area ($p<.01$), final area ($p<.01$) but were not associated with a significant difference in the number of Mohs layers required for clearance. Tumors designated as recurrent were more likely to have a larger initial defect size (mean 1cm2 vs. 0.5cm2, $p<.001$). A larger final area ($p<.01$) and older age ($p=.03$) were independently associated with larger initial area. Reconstruction in this anatomic location required a high level of complexity; 44% of repairs were accomplished with either a local flap or graft. In addition, 13% elected for repair by plastic surgery (of note, females were more likely opt for plastics; this approached, but did not reach significance [$p=.08$]).

CONCLUSION: The results of this retrospective study support current findings in the literature that BCC of the upper lip is more commonly seen in women. This U.S. population of patients treated with Mohs surgery for upper lip basal cell carcinoma consisted of a 1.2:1 ratio of females to males, in contrast to previous reports of female predominance ranging upwards of 3.5:1 in Canadian and Australian populations. Males were found to have a significantly larger initial defect size. However, gender did not influence the number of Mohs layers, tumor subtype, or repair characteristics (women were more likely to have plastics repair but this was not statistically significant).

Elderly patients were more likely to present with a larger initial lesion size. In addition, tumors designated as recurrent made up 10% of all tumors, which was much higher than prior studies which reported rates of 3%. These finding may suggest the need for increased screening efforts by dermatologists and primary care physicians to aide in early detection of primary lesions in the elderly population as well as better surveillance of recurrence in this anatomic location.

The findings also suggested that tumors designated as recurrent tended to be more aggressive with statistically significant larger pre-operative and final defect sizes. They also required more Mohs layers for clearance (although this finding did not reach statistical significance). Further research on the disease course and nature of recurrent basal cell carcinomas of the upper lip is necessary.

Regarding repair, a large number of patients required flap or graft closure or elected for reconstruction by plastic surgery. This may reflect a higher level of cosmetic concern. Given the critical anatomic location, frequent subclinical extension, and risk of recurrence, the use of Mohs micrographic surgery is further validated as the preferred treatment for BCC of the upper cutaneous lip.

032

TITLE: **Mohs Micrographic Surgery at an Academic Mohs Center, 10 Year Comparison (2001-2011)**

AUTHORS: *H. William Higgins, II, MD[1]; Kachiu C. Lee, MD[1]; Ugur Uslu, BA[1]; Raymond G. Dufresne, Jr., MD[1]; Antonio P. Cruz, MD[1]*

INSTITUTION: 1. Dermatology, Brown University, Providence, RI, United States

PURPOSE: Our aim is to evaluate changes over a 10-year span in patient demographics, skin cancer type, and choice of repair at an academic Mohs micrographic surgery (MMS) center.

DESIGN: We conducted a retrospective study on patients treated with MMS at our facility in 2001 against those treated in 2011. Data on the following were collected and analyzed: patient demographics (gender, age), tumor type/subtype, anatomic site of the tumor, primary versus recurrent tumors, initial area, sub-clinical extension (defect size and number of Mohs layers), and repair method.

SUMMARY: We analyzed 793 cases from 2001 and compared them with 893 cases in 2011. The 2011 cohort was slightly older (69 vs. 72 vs. years, $p<.001$) and there were significantly more male patients in 2011 (63% vs. 72%, $p<.001$). Regarding anatomic site, there were far more "body" cases in 2011 (all sites excluding head and neck) with 3% in 2001 and 16% in 2011 ($p<.001$). Tumor types were notably different with far more squamous cell carcinoma in situ (SCCIS) cases in 2011 (41 vs. 110, $p<.001$) as well as more treated cases of keratoacanthoma (KAC) (1 vs. 13, $p<.01$). There were also significantly more invasive squamous cell carcinomas (SCC) treated (52 vs. 129, $p<.001$). Furthermore, the initial area (defect size after first layer is taken) was slightly larger (0.94cm2 vs. 1.08 cm2, $p<.01$) and there were more layers taken in 2011 (1.50 vs. 1.69, $p<.0001$). When evaluating repairs, it was noted in 2011 that there was a significant increase in the number of flaps (76 vs. 120, $p=.011$), linear closures (357 vs. 494, $p<.001$) and in the use of second-intention healing (51 vs. 111, $p<.001$). There was also a large decrease in the number of plastic surgery referrals (274, 2001 vs. 119, 2011, $p<.001$).

CONCLUSION: The findings in our study confirm that non-melanoma skin cancer continues to be a predominantly male disease. The fact that our center treated more "body" cases could represent a softening criteria for Mohs or even increasing patient preference for more definitive excision. Utilization of Mohs for the treatment SCCIS and/or KAC is still a topic of controversy. However, our center's significantly increased use of Mohs for margin control in these tumor types may suggest that MMS is helpful and necessary to delineate the sub-clinical spread of these tumor types. The recent increase in invasive SCC's may explain the increase in initial defect size and the increase in layers needed to clear the tumor. Also, our center was less apt to refer for outside repair, suggesting our patient's increasing comfort with complex closures by a Mohs surgeon.

Poster Presentation Summaries

033

TITLE: **Grossly Inaccurate Dermatology and Mohs Surgery Physician Rosters Maintained by Private Health Insurers in 3 Major US Cities**

AUTHORS: *Jennifer A. Cafardi, MD[1]; Richard Torbeck, III, MS, BA[1]; Pryze Smith, PhD[2]; Brett M. Coldiron, MD, FACP[1]*

INSTITUTIONS: 1. The Skin Cancer Center/TriHealth, Cincinnati, OH, United States 2. Hatton Research Institute, Cincinnati, OH, United States

PURPOSE: Private health care insurers maintain directories of health care providers which have important implications: (1) These directories are used to market their health networks to businesses, groups and individuals. Businesses use these directories as accurate to buy coverage for their employees. (2) Patients refer to these directories to find a health care provider, and (3) Subspecialty practice restrictions (which are usually not listed) further restrict the number of health providers. These inaccurate directories become a barrier for patients and clinicians trying to schedule appointments. It is impossible for providers to correct these errors since they are not allowed to edit the directories.

DESIGN: Online searches were conducted within the major health insurances' websites, utilizing the "find a physician" option. The physician directory was searched, using radius of 25 miles for each city, in order to find a list of dermatologists and Mohs surgeons for each plan under each insurance company in 3 Major US Cities – Cincinnati, OH, Birmingham, AL and San Francisco, CA. These physicians' names were entered into a database consisting of their name, age, zip code(s) where they practice, practice restrictions in terms of diseases treated, days per week they are working, whether they are accepting new patients. Physicians' specialties were confirmed via telephoning the office and by the website maintained by the state medical board, the American Academy of Dermatology (for dermatologists), the Mohs College, and/or the American Medical Association. All duplicate names, retired/deceased physicians, and inaccuracies within the specialties were recorded. The accuracy of the reported number was compared to the actual number.

SUMMARY: We found that the accuracy of these physician rosters is less than 70% for all cities for dermatology and Mohs surgery. The roster for Mohs surgeons was the most inaccurate. Many Mohs surgeons were found on the insurance plans under "dermatologists" but not under "micrographic Mohs surgery" within the same plan.

CONCLUSION: The inaccuracies in these rosters are due to providers who are retired, dead, have moved, wrong and nonspecific specialty listings, and multiple duplicate listings. Such inaccuracies may lead to delay in patient care, preferential access to the Mohs surgeons who are listed correctly, inflate the apparent accessibility of these providers, and are deceptive to businesses purchasing the plans.

034

TITLE: **Comparing MITF to Mart-1 Immunostaining of Frozen Radial Sections in the Treatment of Lentigo Maligna**

AUTHORS: *Mark A. Hyde, MMS, PA-C[1,2]; Glen M. Bowen, MD[1,2]; Anneli R. Bowen, MD[2]*

INSTITUTIONS: 1. Melanoma and Cutaneous Oncology, Huntsman Cancer Institute at the University of Utah, Salt Lake City, UT, United States 2. Department of Dermatology, University of Utah, Salt Lake City, UT, United States

PURPOSE: Freeze artifact associated with the preparation of tissue sections stained with hematoxylin and eosin of resected lentigo maligna can make the distinction between melanocytes and basal cells very difficult. To overcome the ambiguity associated with freeze artifact many Mohs surgeons utilize immunostaining of frozen sections with either Mart-1, Melan-A, or MITF. Mart-1/Melan-A antibodies recognize epitopes on pre-melanosomes whereas MITF directed antibodies target intranuclear antigens in melanocytes and osteoclasts. In our experience, Mart-1 yields superior sensitivity while MITF gave better specificity. In order to evaluate the strengths and weaknesses of the two immunostains we sought to perform a randomized prospective blinded study to determine if the Mohs surgeon and the dermatopathologist would reproducibly create identical tumor maps of specimens immunostained with Mart-1 compared to MITF.

DESIGN: Twenty patients with lentigo maligna or lentigo maligna melanoma were prospectively enrolled in a study where staged excisions were performed, radial frozen sections prepared, and stained with routine hematoxylin and eosin (H and E) as well as with Mart-1 and MITF. As Mart-1 and H and E have been used as our standard of care, clinical decisions were based on review of those stains alone. All slides were then de-identified and randomized and submitted for microscopic review to the Mohs surgeon and a dermatopathologist who were given two blank tumor maps: one for Mart-1 and one for MITF. The two physicians looked at all slides independently of each other and were asked to create tumor maps of areas of positivity marked with red ink. The dermatopathologist made maps for all of the Mart-1 specimens while the Mohs surgeon made maps for all of the MITF specimens. One week later, the physicians were then given the opposite immunostain in random fashion and created a new set of tumor maps for the alternate antibody. Once the maps were completed, the data was compared to evaluate reproducibility between immunostains and between physicians. Subsequently, each physician reviewed all maps together to discuss discrepancies and pros and cons of each antibody were evaluated and summarized.

SUMMARY: Pending.

CONCLUSION: Pending.

Poster Presentation Summaries

035

TITLE: **Repair of Difficult Post-Mohs Defects with Porcine Urinary Bladder Extracellular Matrix**

AUTHORS: *Gunjan M. Modi, MD[1]; Mohsin Mir, MD[1]; Jodi S. Markus, MD[1]; Ida F. Orengo, MD[1]*

INSTITUTION: 1. Dermatology, Baylor College of Medicine, Houston, TX, United States

PURPOSE: To examine the use of porcine urinary bladder extracellular matrix (UBM) as an option for management of post-Mohs surgical defects.

DESIGN: Four patients were selected, each with a full-thickness defect on the face (A. nasal tip, B. cutaneous lip, C. nasofacial sulcus, D. nasal dorsum) following clearance of non-melanoma skin cancer by Mohs surgery. Patients had refused surgical repair, including by skin flap, skin graft, and primary intention. Commercially available UBM was applied to the defects immediately post-operatively, and then re-applied weekly to twice-weekly, until granulation of the wound bed and re-epithelialization was clinically noted.

SUMMARY: All four patients were photographed during each follow-up visit to document response (initial and final pictures of each patient shown). No patients showed any signs of infection or hypersensitivity reaction. Cosmetic results were acceptable to all of the patients.

Patient A had complete re-epithelialization of the nasal tip and columella, with nares patent bilaterally. Patient B had complete re-epitheliazation of the defect with maintenance of the nasolabial fold. There was no lip retraction noted. Patient C had complete re-epithelialization of the defect including re-establishment of the lateral nasal ala and nasofacial sulcus, with no disruption of the nasolabial fold. Patient D was lost to follow-up, but at 1 month post-operatively, had significant reduction in the size of the defect with near-complete granulation, and partial epitheliazation. Mild retraction of the left nasal ala was noted.

CONCLUSION: This case series demonstrates that UBM provides an acceptable alternative for patients with complex surgical defects who are either poor candidates for reconstructive surgery or refuse reconstruction.

Clinically, the use of UBM has been previously reported with promising results in the treatment of chronic non-healing ulcers in diabetic patients. In animal models, its use has been studied more extensively, with efficacy in the repair of defects in a variety of tissues, including esophagus, trachea, thoracic and abdominal wall, tympanic membrane, and myocardium. While the mechanism of action of this extracellular matrix (ECM) scaffolding remains poorly understood, one reasonable hypothesis is the presence, survival, and integrity of basement membrane complex during the processing of porcine bladder to extract UBM. This is reportedly a property unique to UBM when compared to other ECM scaffolds and may play a role in preferentially inducing site-specific tissue repair instead of scar formation.

Patient A. Left column: defect immediately post-Mohs. Right column: 3-months post-Mohs.

Top Row: Patient B immediately post-Mohs and at 1-month post-Mohs. Middle Row: Patient C immediately post-Mohs and at 6-weeks post-Mohs. Bottom row: Patient D immediately post-Mohs and at 6-weeks post-Mohs.

Poster Presentation Summaries

036

TITLE: **Use of Porcine Xenografts on Large Partial-thickness Vermillion and Mucosal Lower Lip Mohs Defects**

AUTHORS: *Amanda J. Pickert, MD[1]; Shari A. Nemeth, MD[1]*

INSTITUTION: 1. Dermatology, Mayo Clinic Arizona, Scottsdale, AZ, United States

PURPOSE: Large partial-thickness Mohs defects on the vermilion and mucosal lower lip can be difficult to repair. The objectives of a repair are to maintain lip function and aesthetics. Second-intention healing will often result in a desirable outcome, even on large defects. However, exposure to foreign material, the environment, and oral flora increases the likelihood of post-operative pain, infection, and prolonged healing. Placement of a porcine xenograft protects the wound during the immediate post-operative period, decreases healing time, minimizes wound care, and potentially facilitates a good surgical outcome in this location.

DESIGN: Seven patients in our practice underwent porcine xenograft closure of a Mohs defect on the mucosal and/or vermillion lower lip from November 2010 to December 2011. Defect size ranged from 1.6 to 13.0 cm2. All wounds were immediately reconstructed with the porcine xenograft. Clinical endpoints included patient discomfort during healing, healing time, oral competence, and aesthetic outcome. Endpoints were evaluated using patient reports and photographic assessments.

SUMMARY: All patients reported an acceptable level of discomfort during healing and would have the procedure performed again if needed. Porcine graft disintegration resulted in a "goopy lip" which per patient report was the most unpleasant facet of healing. Although there was variation in wound size, on average, re-epithelialization was complete by 3-6 weeks, which is below reports for second-intention healing. No patient reported functional impairment and all had satisfactory cosmetic outcomes.

CONCLUSION: Second-intention healing of large partial-thickness vermillion and/or mucosal lower lip Mohs defects can result in acceptable surgical outcomes. When felt to be the best repair option, application of a porcine xenograft to the defect should be considered. Application augments patient discomfort and facilitates quicker healing.

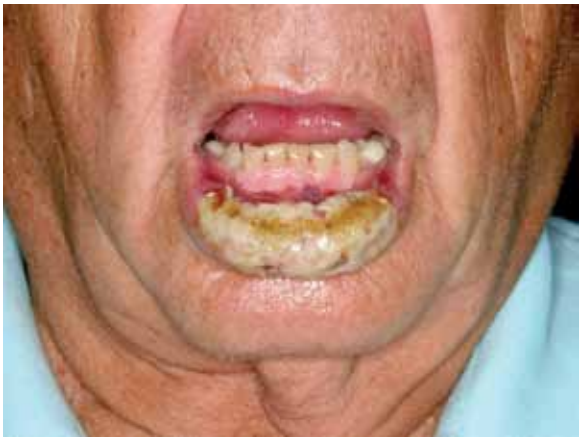


Figure 1. Postoperative day 7 after placement of a porcine xenograft to a 13.0 cm2 Mohs defect on the lower lip, graft is being to disintegrate and gives the lip a goopy appearance.

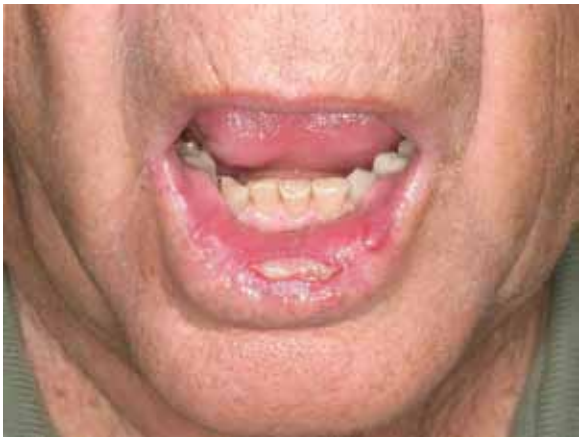


Figure 2. Postoperative day 21 after placement of a porcine xenograft to a 13.0 cm2 Mohs defect on the lower lip, defect is greater than 90% healed with good cosmetic result.

Poster Presentation Summaries

037

TITLE: **The Island Pedicle Flap is a Cosmetically Acceptable Alternative to more Conventional Repairs for Subcentimeter Defects on the Lower Two-thirds of the Nose**

AUTHORS: *Gary W. Mendese, MD[1,2]; Donald J. Grande, MD[1,2]; Stuart H. Bentkover, MD[3,4]*

INSTITUTIONS: 1. Mystic Valley Dermatology, Stoneham, MA, United States 2. Dermatology, Boston University School of Medicine, Boston, MA, United States 3. Bentkover Facial Plastic Surgery and Laser Center, Worcester, MA, United States 4. Harvard Medical School, Boston, MA, United States

PURPOSE: Defects on the lower two-thirds of the nose often present reconstructive challenges. Surgical defects on the lower third (consisting of the alae, alar grooves and nasal sidewalls) and even the middle third (nasal supratip area) are commonly repaired by the standard bilobed transposition flap. Though consistent and cosmetically acceptable, the bilobed flap often violates the principal of single cosmetic subunit reconstruction, can lead to trapdoor deformity and in some cases can distort the alar rim. As an alternative, the island pedicle flap can be readily used to repair lesions upwards of 1 cm in diameter on the lower nose.

DESIGN: Full thickness Mohs surgery defects of the lower two-thirds of the nose are presented. The stepwise surgical reconstruction of the defects using the island pedicle flap is described. Step-by-step intraoperative and postoperative photographs are presented and reviewed.

SUMMARY: At least six defects on the lower portions of the nose have been repaired by the island pedicle flap the last year alone, all with acceptable cosmesis and no complications.

CONCLUSION: The island pedicle flap can be safely and easily used to repair lower nasal defects encountered during Mohs micrographic surgery. The final cosmetic and functional results can be equal if not superior to the more conventional repairs employed in this area. Patient satisfaction is high and no follow-up procedures have been needed. The island pedicle flap can be a useful tool in repairing selected defects of the lower nose.

038

TITLE: **Bovine Collagen Xenograft Repair of Extensive Surgical Scalp Wounds with Exposed Calvarium**

AUTHORS: *Jordan B. Slutsky, MD[1]; Megan Rogge[1]; M. Laurin Council, MD[1]; Scott W. Fosko, MD[1]*

INSTITUTION: 1. Dermatology, Saint Louis University, St. Louis, MO, United States

PURPOSE: Mohs micrographic surgery (MMS) or staged "slow Mohs" staged excision (SMSE) for infiltrative skin cancers of the scalp may leave wounds exposed to the level of the calvarium, many extensive in size. Reconstruction of these complex wounds using local flaps, full or split thickness skin grafts (FTSG, STSG) or free flap repair is often challenging, may result in large secondary defects, has high associated morbidity and may not provide optimal cosmetic outcome. Elderly skin cancer patients, many with multiple co-morbidities, may not be candidates for complex reconstructive procedures, and younger patients who could tolerate such repairs might not desire to undertake them. Healing by secondary intention is a viable method of closing these wounds, but is complicated by prolonged healing time and significant wound care. Collagen xenografts are another reconstructive option and seemingly expedite the process of secondary intention healing with minimal surgical morbidity. Collagen xenografts promote healing by providing the matrix for regenerative cells while being remodeled and incorporated into host connective tissue. The objective of this study is to assess clinical outcomes with the use of a bovine collagen xenograft (BX) for reconstruction of scalp wounds with exposed calvarium.

DESIGN: We reviewed 5 cases of infiltrative skin cancers (3 SCC, 2 BCC) of the scalp in which a BX was used successfully and solely for reconstruction of wounds extending to calvarium, after periosteum was removed for tumor extirpation (4 cases of SMSE, 1 case of MMS). The wounds ranged in size from 3.6x2.7cm to 15.1x8.5 cm (9.7cm2 to 128.4cm2). In each case, 2 layers of BX moistened with sterile saline were sutured into the wound bed using 5-0 fast absorbing gut. For each patient, a BX was placed either immediately post-operatively or in a delayed manner, with some patients requiring replacement of the BX up to 2 times depending on the depth/size of wound and if there was residual exposed bone. Wound care involved petrolatum ointment covered with a bandage twice daily until appropriate contour of wound was reached and then acetic acid soaks to promote re-epithelialization. Patient outcomes were assessed using clinic notes, measurements and photographs. Granulation tissue covering calvarium was achieved in 3 to 6 weeks in all patients. Re-epithelialization was complete in 15 weeks in 1 patient and is progressing in all patients. No patients experienced post-operative bleeding or wound infections; 2 took pre-operative antibiotics (1 for a prosthetic heart valve, 1 for a hip replacement). Patients reported minimal pain which did not require analgesics stronger than acetaminophen.

Poster Presentation Summaries

CONCLUSION: Reconstruction of scalp wounds extending to the calvarium can be effectively accomplished with bovine collagen xenografts. Our success using BXs for extensive scalp wounds with exposed bone is better than initially anticipated, and our surgical colleagues in otolaryngology are now discussing this with patients as an alternative to more complex repairs. Advantages include minimal surgery and associated morbidity, especially when compared to flap/graft/free flap repairs. BXs are especially useful in elderly patients with multiple co-morbidities who are not ideal candidates for complex repairs. Unlike flaps and grafts, BXs do not require second surgical sites or the enlargement of surgical wounds. Compared to secondary intention, BXs immediately cover exposed bone making wound care easier, and appear to expedite granulation. BX placement is a simple procedure appreciated by patients who have undergone lengthy tumor extirpation. BXs may be replaced as many times as needed, and can serve as a bridge to another type of repair if needed by decreasing wound diameter and depth. We have found that BXs provide good contour and cosmesis for scalp repairs; in one case the BX was cosmetically superior to a previous STSG. Disadvantages of BXs for deep scalp wounds include the duration of healing, the need for daily wound care, and multiple follow-ups to ensure proper healing and guide wound care.

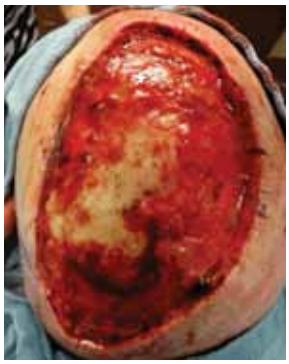


Figure 1. Surgical scalp wound to calvarium.

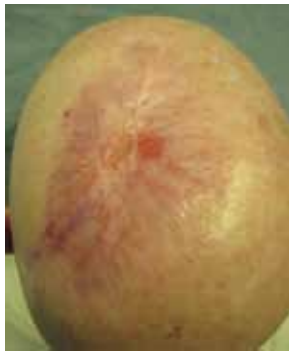


Figure 2. Granulating wound at 6 months after BX; note depressed STSG scar on left scalp from previous surgery.

039

TITLE: Full-thickness Skin Grafts Do Not Need Tie-over Bolster Dressings

AUTHORS: *Ikue Shimizu, MD[1]; Deborah F. MacFarlane, MD, MPH[1]*
INSTITUTION: 1. Dermatology, UT MD Anderson Cancer Center, Houston, TX, United States

PURPOSE: Although traditionally performed following full-thickness skin grafts (FTSGs), tie-over bolster dressings are bulky, unsightly, inconvenient for the patient, and often a source of complaint. There is little evidence in the literature that shows that tie-over bolsters are necessary.

DESIGN: In this IRB-approved retrospective study, FTSGs were performed with bolsters in the first year and without bolsters in the second year of the study. Patient age, gender, smoking status, immune status, site, greatest defect length, and clinical outcome (graft take) at suture removal were analyzed. Graft take was defined as "complete" if there was a well-vascularized graft with minimal crusting, and "incomplete" if there was generalized superficial crusting or sloughing with viable graft underneath.

In the bolster group (BG), bolsters consisted of petrolatum gauze secured with tie-over sutures. No basting sutures were used. In the non-bolster group (NBG), grafts were secured with peripheral sutures and no basting sutures, then dressed with a layer of petrolatum gauze, mupirocin ointment, and a pressure dressing for 48 hours. Subsequent dressings involved replacing the petrolatum gauze and mupirocin ointment, then covering with a non-stick dressing and tape daily.

SUMMARY: A total of 96 FTSGs were performed (47 bolster, 49 non-bolster). Defect sites included the nose, ear, face, neck, hand, arm, and trunk. Greatest defect length ranged from 0.7cm - 5.3cm for the BG (mean 2.01cm), and 0.7cm - 5.0cm for the NBG (mean 1.92cm). Average age was 72.1 years for the BG versus 69 years for the NBG.

Graft take did not differ significantly between the two groups at suture removal. Incomplete take was seen in 7 of the bolster and 8 of the non-bolster cases. Neither smoking status nor immunodeficiency interfered with graft take. All cases showed excellent long term appearance regardless of bolster use.

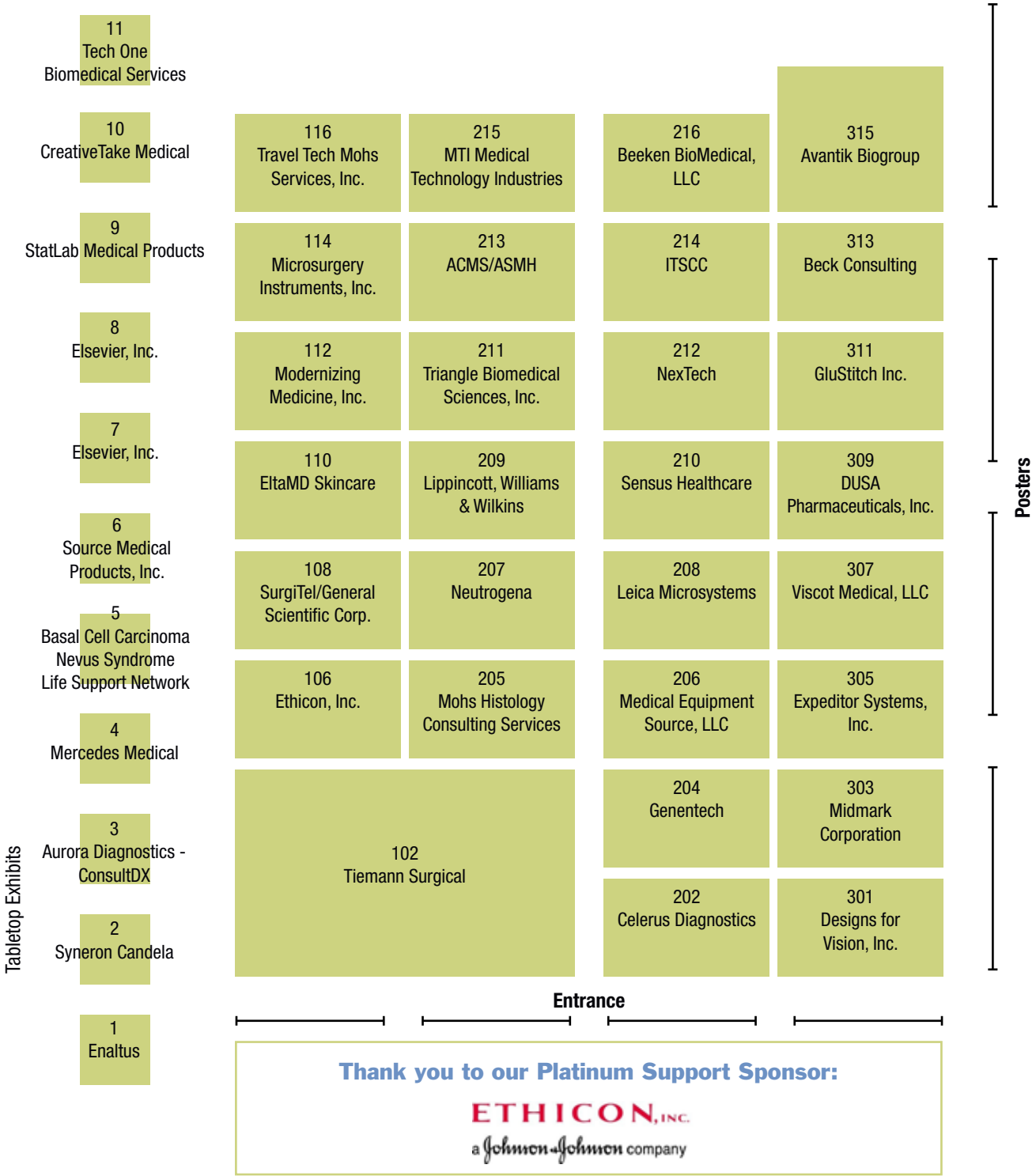
CONCLUSION: Bolster use does not affect surgical outcome of FTSGs. We conclude that tie-over bolsters may be unnecessary for FTSGs when defects are smaller than 5cm. It is more efficient and economical for the surgeon and more convenient for the patient if tie-over bolster dressings are not used. .

Exhibitor Floor Plan

Exhibit Hall hours:

Thursday, May 3 12:00 – 1:30 pm; 3:00 – 7:30 pm
Friday, May 4 12:00 – 6:30 pm
Saturday, May 5 11:30 am – 1:30 pm

Exhibit Hall located in the International Ballroom; 2nd Level



Thank you to our Platinum Support Sponsor:

ETHICON, INC.
a Johnson & Johnson company

Exhibitor Listing

3 Aurora Diagnostics – ConsultDX
11025 RCA Center Drive, Suite 300
Palm Beach Gardens, FL 33410
Phone: (561) 714-7322
Fax: (561) 626-4530
Email: jvanburen@auroradx.com
Website: www.auroradx.com

Aurora Diagnostics – ConsultDX program provides pathology consultation services for creating innovative and profitable pathology revenue solutions for physician practices. Programs are customized to meet practice needs, are easy to implement, provide a high level of patient care, are low-risk, have minimal costs, and offer a dedicated support team.

315 Avantik Biogroup
32 Commerce Street
Springfield, NJ 07081
Phone: (973) 912-8900
Fax: (973)232-0077
Email: sales@avantik-us.com
Website: www.avantik-us.com

Avantik Biogroup, dedicated to delivering exceptional service and quality products to the Mohs surgery laboratory. Your single source for instrumentation, consumables, and support.

5 Basal Cell Carcinoma Nevus Syndrome Life Support Network
P.O. Box 321
Burton, OH 44021
Phone: (440) 834-0011
Fax: (440) 834-0132
Email: info@bccns.org
Website: www.gorlinsyndrome.org

A patient-centered organization providing counseling and support services to families manifesting the genetic disorder known as Basal Cell Carcinoma Nevus Syndrome / Gorlin Syndrome. We provide learning opportunities for early diagnosis and intervention, information about treatment, and access for affected patients and caregivers to participate in meetings, camps, and clinical trials.

313 Beck Consulting
894 Buck Falls Road
Highlands, NC 28741
Phone: (828) 369-2315
Fax: (800) 282-3066
Email: histobarb@msn.com
Website: www.beck-us.com

Beck Consulting is the ONLY technical training and consulting firm for Mohs and histology laboratories with an accredited program for over ten years. We offer the most complete technical assistance and training to Mohs and Histopathology labs with little or no experience, as well as advanced training to those who already have experience. We train on your own instruments and equipment to keep your staff in their own environment. We offer full laboratory set up for both Derm Path and Mohs labs, from layout to full training of new techs. Our extensive training includes education regarding laboratory regulations for CLIA/OSHA, and all documentation for your office to become CLIA compliant. We have a zero deficiency rating with CLIA inspections in every one of the 423 labs that we have set up to date!

216 Beeken BioMedical, LLC
38 W. Main Street
Carnegie, PA 15106
Phone: (877) 877-2533
Fax: (866) 724-3396
Email: mniemi@beekenbiomedical.com
Website: www.beekenbiomedical.com

Beeken BioMedical, LLC is an emerging medical device company focused on the development, licensing and commercialization of differentiated products in the wound care market space. Beeken is currently commercializing a unique hemostatic wound dressing and polymer liquid bandage with antimicrobial properties. Our portfolio consists of FDA-cleared products featuring hemostasis and polymer-based technology platforms.

202 Celerus Diagnostics
1005 Mark Avenue
Carpinteria, CA 93013
Phone: (805) 684-2009
Fax: (805) 684-2088
Email: info@celerusdiagnostics.com
Website: www.celerusdiagnostics.com

The Celerus Wave® RPD System provides a rapid and reliable means to aid in the assessment of surgical margins in Mohs micrographic surgery. By delivering high quality immunohistochemistry (IHC) results in just 15 minutes, critical decisions can be made with speed and confidence. Turn to Rapid IHC® for rapid answers. www.celerusdiagnostics.com

10 CreativeTake Medical
133 Traviso Drive
Palm Desert, CA 92211
Phone: (323) 244-0031
Fax: (760) 469-3330
Email: rick@creativetakeweb.com
Website: www.creativetakemedical.com

CreativeTake Medical is a full-service boutique website design and internet marketing company with over 15 years of experience to our credit. Part of what sets CreativeTake Medical apart from other organizations is the depth of our experience: Our staff has first-hand experience with running a medical practice that has built an extensive knowledge-base that is specific to the medical field. We apply this knowledge and experience to create effective, custom-designed marketing plans and websites for each of our clients. Each website is usable, breathtaking, effective, easy to navigate and informative, and will appear among the highest rankings on internet search engines.

Exhibitor Listing

301 Designs for Vision, Inc.
760 Koehler Avenue
Ronkonkoma, NY 11779
Phone: (800) 345-4009
Fax: (631) 585-3404
Email: info@designsforvision.com
Website: www.designsforvision.com

Just See It™ with Designs for Vision's light weight custom-made Surgical Telescopes – now available with Nike® frames. These telescopes improve visual acuity and reduce back and neck pain. See It Even Better™ with the L.E.D. Daylite™ or Twin Beam™ L.E.D. providing the brightest and safest untethered illumination.

309 DUSA Pharmaceuticals, Inc.
25 Upton Drive
Wilmington, MA 01887
Phone: (978) 657-7500
Fax: (978) 657-9193
Email: cs-dept@dusapharma.com
Website: www.dusapharma.com

DUSA Pharmaceuticals is an integrated, dermatology pharmaceutical company focused primarily on the development and marketing of its Levulan® Photodynamic Therapy (PDT) technology platform.

7, 8 Elsevier, Inc.
1600 John F. Kennedy Boulevard, Suite 1800
Philadelphia, PA 19103
Phone: (215) 239-3400
Fax: (215) 238-7883
Website: www.us.elsevierhealth.com

110 EltaMD Skincare
2055 Luna Road, #126
Carrollton, TX 75006
Phone: (800) 633-8872
Fax: (972) 385-7430
Email: info@eltamd.com
Website: www.eltamd.com

EltaMD® develops and provides innovative sun care, skin care and post-procedure products that help develop, protect and maintain healthy skin. Available through dispensing physicians, EltaMD® products are formulated for all skin types and lifestyles.

1 Enaltus
1100 Satellite Boulevard
Suwanee, GA, 30024
Phone: (678) 684-1426
Fax: (678) 684-1422
Email: info@enaltus.com
Website: www.enaltus.com

Enaltus™ specializes in professional and consumer scar and other skincare products. Our core products include Kelo-cote® Advanced Formula Scar Gel and bioCorneum+®, the only 100% silicone scar product with an SPF providing UVA/UVB protection. Other US and internationally marketed brands include Belli Skincare®, Celazome®, Capriclear®, Skinfoto™, Hydrosal®, Arnika Forte™ and Hydro-Q gel™.

106 Ethicon, Inc.
Platinum Support Sponsor
Route 22 West
Somerville, NJ 08876
Phone: (877)-ETHICON
Website: www.ethicon360.com

Ethicon, Inc. has been a leader in surgical sutures for more than 100 years. With innovative technologies such as DERMABOND® Topical Skin Adhesive, Plus Antibacterial Sutures and FlexHD® Acellular Hydrated Dermis, ETHICON is focused on the specific needs of the surgeon, nurse, patient and hospital. Our mission: Restoration of body, and of life.

305 Expeditor Systems, Inc.
4090 Nine McFarland Drive
Alpharetta, GA 30004
Phone: (800) 843-9651
Fax: (770) 664-5214
Email: info@expeditor.com
Website: www.expeditor.com

Expeditor Systems offers patient flow solutions for progressive minded medical facilities. More than 7,500 practices and 30,000 providers across all 50 states rely on our custom design to streamline patient flow, increase productivity, and enhance efficiency.

204 Genentech
1 DNA Way
South San Francisco, CA 94080
Phone: (650) 225-1000
Website: www.gene.com

Considered the founder of the biotechnology industry, Genentech has been delivering on the promise of biotechnology for more than 35 years, using human genetic information to discover, develop, manufacture and commercialize medicines to treat patients with serious or life-threatening medical conditions. Today, Genentech is among the world's leading biotech companies, with multiple products on the market and a promising development pipeline.

Exhibitor Listing

311 GluStitch Inc.
307-7188 Progress Way
Delta, BC V4G 1M6, Canada
Phone: (604) 940-2262
Fax: (604) 940-0552
Email: info@glustitch.com
Website: www.glustitch.com
GluStitch Inc. is a company that specializes in manufacturing medical grade cyanoacrylates. GluSeal® is an FDA cleared cyanoacrylate available in a clear and violet multiuse format.

208 Leica Microsystems
1700 Leider Lane
Buffalo Grove, IL 60089
Phone: (800) 248-0123
Fax: (847) 236-3009
Website: www.leica-microsystems.com
Visit the Leica Microsystems booth to see the latest technology for Mohs laboratories. Leica Microsystems has a full line of equipment for rapid diagnosis, including cryostats, mini-stainers and microscopes, plus everything needed for a permanent-section paraffin laboratory. Through the acquisition of Surgipath, Leica also has a complete line of consumables and reagents. All of Leica's products comply with the most stringent safety standards and are capable of fulfilling the needs of even the busiest dermatologic practice.

209 Lippincott, Williams & Wilkins
1578 Fordham Street
Bolingbrook, IL 60490
Phone: (630) 776-7108
Fax: (630) 771-0941
Email: scott.stewart@wolterskluwer.com
Website: www.lww.com
Lippincott, Williams & Wilkins will have on display the latest products and literature in all areas related to Dermatology and Dermatologic Surgery!

206 Medical Equipment Source, LLC
364 Mars-Valencia Road
Mars, PA 16046
Phone: (724) 369-1604 Fax: (724) 625-2235
Email: info@medequipsource.com
Website: www.medequipsource.com
Medical Equipment Source, LLC is a leading international medical equipment supplier of new and refurbished Mohs, Pathology, Histology and Cytology equipment. We carry all major manufacturer brands for individual purchase or whole lab set ups. Our staff includes a Board Certified Histotechnologist, a Mohs Technician, technically trained sales representatives, Biomedical Engineers/ Technicians, and Biomed lab installers who are prepared to provide expert advice, enable better decisions and offer you a solution in a day. We support our customers before, during and after the sale.

4 Mercedes Medical
7590 Commerce Court
Sarasota, FL 34243
Phone: (941) 355-3333
Fax: (941) 487-2398
Website: www.mercedesmedical.com
Mercedes Medical is a privately held, woman-owned national medical distribution company located in Sarasota, Florida. For 20 years we have prided ourselves on being the low cost leader in the Histology and Mohs supply market. With a keen interest on efficiency and customer service, we provide customers with high quality products at the lowest possible price. Don't forget to request your free cookies with every order!

114 Microsurgery Instruments, Inc.
P.O. Box 1378
Bellaire, TX 77402-1378
Phone: (713) 664-4707
Fax: (713) 664-8873
Email: microusa@microsurgeryusa.com
Website: wwWebw.microsurgeryusa.com
Microsurgery Instruments is one of the leading suppliers of surgical instruments and loupes. Our new instruments include: titanium scissors, needle holders, and debakey forceps. Our Super-Cut scissors are the sharpest in the market, and our newly designed surgical loupes offer up to 130mm field of view, and up to 11x magnification.

303 Midmark Corporation
60 Vista Drive
Versailles, OH 45380
Phone: (800) 643-6275
Fax: (800) 365-8631
Email: info@midmark.com
Website: www.midmark.com
Midmark Corporation is a leading manufacturer of the most user-and patient-friendly examination and procedure equipment available. Headquartered in Versailles, Ohio, with a subsidiary in Ernée, France, Midmark provides a full line of power and manual examination tables, sterilizers, casework, seating, lighting, digital diagnostics and accessories for use in healthcare systems and facilities worldwide.

112 Modernizing Medicine, Inc.
3330 South Federal Highway, Suite 300
Boynton Beach, FL 33435
Phone: (866) 799-2146
Fax: (561) 423-5912
Email: info@modernizingmedicine.com
Website: www.modernizingmedicine.com
Modernizing Medicine, Inc. provides software as a service solution to dermatologists. The product, EMA dermatology is intuitive, fast, and full of medical knowledge and works on an iPad.

Exhibitor Listing

205 Mohs Histology Consulting Services
2507 S. Manito Boulevard
Spokane, WA 99203
Phone: (509) 954-7134
Email: mickie25@netzero.net
Website: www.mohshistologyconsulting.com

We provide the highest quality comprehensive and accredited Mohs technician training and Mohs and dermatology histology laboratory, consultation, setup and training. Our Mohs Lab Staffing division provides experienced technicians for maternity/emergency leave and vacation relief coverage. We have an 11 year reputation of highly regarded service. We travel where you need us!

215 MTI Medical Technology Industries
3655 West Ninigret Drive
Salt Lake City, UT 84104
Phone: (801) 875-4903
Fax: (801) 952-0548
Email: matthew.baker@mti.net
Website: www.mti.net

MTI will exhibit samples of surgery and exam chairs/tables powered by the industry leading low voltage DC motor technology. We will have quad, tri, dual and single power surgery tables and exam chairs, lighting and stools will also be on display with a large number of integrated and complementary accessories.

207 Neutrogena
5760 West 96th Street
Los Angeles, CA 90045
Phone: (310) 337-6815
Email: scropper@its.jnj.com
Website: www.neutrogenamd.com

Neutrogena advances skin and hare care science through continuous support of the medical community and through the development of clinically proven products that fulfill the skincare needs of physicians, nurses, and patients. Please visit our exhibit and website: www.neutrogena.com for information about the recent addition to the Neutrogena product line.

212 NexTech
5550 West Executive Drive, Suite 350
Tampa, FL 33609
Phone: (813) 425-9200 / (800) 490-0821
Fax: (813) 425-9292
Email: websales@nextech.com
Website: www.nextech.com

A powerful and complete dermatology software solution, NexTech Practice 2012 is fully integrated, certified EMR, Practice Management, and Marketing software designed specifically for Dermatology – General, Cosmetic, and Mohs surgery. With input from our client base of 7000 providers and 40,000 in staff worldwide, Practice 2012 is comprehensive, completely modular and adapts to the way you practice medicine.

210 Sensus Healthcare
851 Broken Sound Parkway, NW #215
Boca Raton, FL 33487
Phone: (561) 922-5808
Fax: (561) 948-2071
Email: info@sensushealthcare.com
Website: www.sensushealthcare.com

Sensus Healthcare is focused on making proven non-melanoma skin cancer solutions more accessible to patients. Our dedicated superficial radiation therapy (SRT) systems are designed specifically to provide an alternative to surgical procedures for basal cell and squamous cell carcinomas. Our mobile, compact SRT-100™ systems are used widely by oncologists and dermatologists to bring non-melanoma skin cancer treatment to more patients in more settings.

6 Source Medical Products, Inc.
1274 Telegraph Road
Lake Forest, IL 60045
Phone: (847) 735-9965
Fax: (847) 735-0366
Email: customerservice@sourcemp.com
Website: www.sourcemp.com

Source Medical Products is a customer-driven anatomic pathology products company founded over 13 years ago. Our goal is to offer our market place expertise as a service to the laboratory buyer so they can receive the highest quality products at the best value. We have worked hard to provide you with a robust portfolio of products supported by a network of professionals who can answer questions you may have about our pathology, histology and Mohs lab products. We work for you!

9 StatLab Medical Products
407 Interchange Street
McKinney, TX 75071
Phone: (800) 442-3573
Fax: (972) 436-1369
Email: mbrown@statlab.com
Website: www.statlab.com

StatLab is a leading manufacturer and distributor solely focused on Mohs laboratory and other pathology consumables. We provide high quality products, delivered on time, at competitive prices. We're confident you'll find a partnership with StatLab valuable due to our ability to drive costs from the healthcare supply chain without sacrificing quality, service, or support.

Exhibitor Listing

108 SurgiTel/General Scientific Corp.
77 Enterprise Drive
Ann Arbor, MI 48103
Phone: (734) 996-9200/(800) 959-0153
Fax: (734) 662-0520
Email: info@surgitel.com
Website: www.surgitel.com

SurgiTel®/GSC will present their award winning ultra lightweight surgical loupes, lightweight fiber optic lights, portable LED lights, clip-on image enhancement filters, and clip-on laser filters. The use of SurgiTel® loupes and illumination systems will not only improve your vision but also reduce your neck and back pain. Also, patented image enhancement filters can significantly enhance anatomical features such as veins, nerves, arteries, etc. These filters can be used with or without surgical loupes.

2 Syneron Candela
530 Boston Post Road
Wayland, MA 01778
Phone: (508) 358-7400
Fax: (617) 507-7895
Email: kbello@syneron.com
Website: www.syneron.com

Syneron Medical Ltd. – a company devoted to real technology, real science and real results – is the leading global aesthetic device company with a comprehensive product portfolio combined with world-class service and support. The Company's technology enables physicians to provide advanced solutions for a broad range of medical aesthetic applications including body contouring, hair removal, wrinkle reduction, rejuvenation of the skin's appearance through the treatment of superficial benign vascular and pigmented lesions, and the treatment of acne, leg veins and cellulite.

11 Tech One Biomedical Services
159 North Marion Street PMB 163
Oak Park, IL 60301-1032
Phone: (708) 383-6040
Fax: (708) 3836045
Email: service@techonebiomedical.com
Website: www.techonebiomedical.com

Tech One Biomedical is a privately owned company for over ten years specializing in the repair of laboratory equipment in hospitals, research labs, and university and private settings, with service reps located in multiple locates in the Northeast, Southeast, and Midwest.

102 Tiemann Surgical
25 Plant Avenue
Hauppauge, NY 11788
Phone: (800) 843-6266
Fax: (800) 577-6050
Email: brian@georgetiemann.com
Website: www.georgetiemann.com

Tiemann specializes in instruments and accessories for Dermatology and Mohs surgery. See our recommended general and Mohs color coded surgical packs and our newly added affordable surgical loupes. Stop by our booth for ACMS and new practice specials. Manufacturers of quality surgical instruments for over 185 years.

116 Travel Tech Mohs Services, Inc.
1300 E. 223rd Street, #411
Carson, CA 90745
Phone: (310) 328-7846
Fax: (310) 328-0690
Email: deborah@gotmohs.com
Website: www.gotmohs.com

In compliance with CLIA and OSHA standards, we provide all of the chemicals and machinery for the tissue processing and staining. All of our equipment is maintained and serviced and only fresh chemicals are used to ensure the highest quality. Our team of technicians has all been trained under the supervision of the founders Alex and Karen Lutz.

211 Triangle Biomedical Sciences, Inc.
3014 Croasdaile Drive
Durham, NC 27705
Phone: (919) 384-9393
Fax: (919) 384-9595
Email: tbs@trianglebiomedical.com
Website: www.trianglebiomedical.com

Triangle Biomedical Sciences specializes in working with private physician offices in the development and implementation of their own in-house physician office labs. Visit the TBS booth to learn how TBS can assist you with generating a new source of revenue for your practice in as little as 2-3 months!

307 Viscot Medical, LLC
32 West Street
East Hanover, NY 07936
Phone: (973) 887-9273
Fax: (973) 887-3961
Email: romola@viscot.com
Website: www.viscot.com

Introducing the Blephmarker™ Surgical Marker with Twin Ultrafine Tips is ideal for precise facial marking or other fine lines. Viscot has offered the broadest line of Surgical Skin Markers for over 35 years. Our markers are high quality and very economical.

ASMH 18th Annual Meeting Scientific Program

May 4 - 5, 2012

Thursday, May 3

7:00 am – 9:00 pm	Visit Mohs Slide Library	Embassy Room, *Level 2*
5:30 pm – 7:30 pm	Exhibit Hall Grand Opening and Welcome Reception	International Ballroom, *Level 2*

Friday, May 4

7:00 am – 9:00 pm	Visit Mohs Slide Library	Embassy Room, *Level 2*
12:00 – 6:30 pm	Exhibit Hall Open	International Ballroom, *Level 2*
7:00 – 8:30 am	Cryostat Workshop 4401	State Room, *Level 2*
7:00 – 8:30 am	Mart-1 Workshop 4402	Ambassador Room, *Level 2*
9:00 – 10:30 am	**General Session 1**	Gold Room, *Level 2*
9:00 am	Opening Remarks and Welcome *Barbara Beck, HT (ASCP), ASMH President*	
9:15 am	The Cutting Edge (And What Disease Might Be On It) *Kimberly Brock, BS, HT (ASCP)*	
10:00 am	An Atypical Day in the Lab *Rodney Barber, HT; Kristin Cox, HT; Mohammed Said Shams*	
10:30 – 11:45 am	**General Session 2**	Gold Room, *Level 2*
10:30 am	2011 Abstract Award Winner *Jamie Ashley Groover*	
10:45 am	CLIA Talk/Game *Barbara Beck, HT (ASCP)*	
11:45 am – 1:00 pm	**Lunch in the Exhibit Hall**	International Ballroom, *Level 2*
1:00 – 2:00 pm	**General Session 3** Troubleshooting Open Forum	Gold Room, *Level 2*
2:00 – 3:30 pm	Cryostat Workshop 4403	State Room, *Level 2*
2:00 – 3:30 pm	Mart-1 Workshop 4404	Ambassador Room, *Level 2*
3:30 – 5:00 pm	Cryostat Workshop 4405	State Room, *Level 2*
3:30 – 5:00 pm	Mart-1 Workshop 4406	Ambassador Room, *Level 2*
5:00 – 6:30 pm	Networking Reception in Exhibit Hall	International Ballroom, *Level 2*

Saturday, May 5

7:00 am – 9:00 pm	Visit Mohs Slide Library	Embassy Room, *Level 2*
11:30 am – 1:30 pm	Exhibit Hall Open	International Ballroom, *Level 2*
7:00 – 8:30 am	Cryostat Workshop 4407	State Room, *Level 2*
7:00 – 8:30 am	Mart-1 Workshop 4408	Ambassador Room, *Level 2*
9:00 – 10:45 am	**General Session 4**	Gold Room, *Level 2*
9:00 am	Opening Remarks and Welcome *Barbara Beck, HT (ASCP), ASMH President*	
9:15 am	Cell Structure Identification *Michelle Pennie, MD*	
10:00 am	Technical Procedures for Slow Mohs on Dermatofibrosarcoma Protuberans – Trials and Tribulations *Guy Edward Orchard, PhD, CSci MSc FIBMS*	
10:45 – 11:00 am	Break	
11:00 am – 12:00 pm	**General Session 5**	Gold Room, *Level 2*
11:00 am	*To Be Announced* 2012 Abstract Award Winner	
11:15 am	Troubleshooting Open Forum	
12:00 – 1:00 pm	ASMH Annual Business Meeting and Lunch Members only, all others lunch on own	Moulin Rouge, *Level 1*
1:00 – 3:15 pm	**General Session 6**	Gold Room, *Level 2*
1:00 pm	A Typical Day in the Lab *Robert Tagliaferro, HT; Diana Encinas*	
1:30 pm	Ten Things Every Tech Should Know About His or Her Surgeon *Teris Minsue Chen, MD*	
2:00 pm	Different Embedding Methods *Fatat Sleiman, HT; Diana Encinas; Deanne Lee Dittmer; Robert Tagliaferro, HT*	
2:45 pm	The Dual Role of a Tech as a Surgical Assistant *Cheryl A. Page*	
8:00 pm	ASMH Night Out/Social Event	*Second City, Chicago, Illinois*

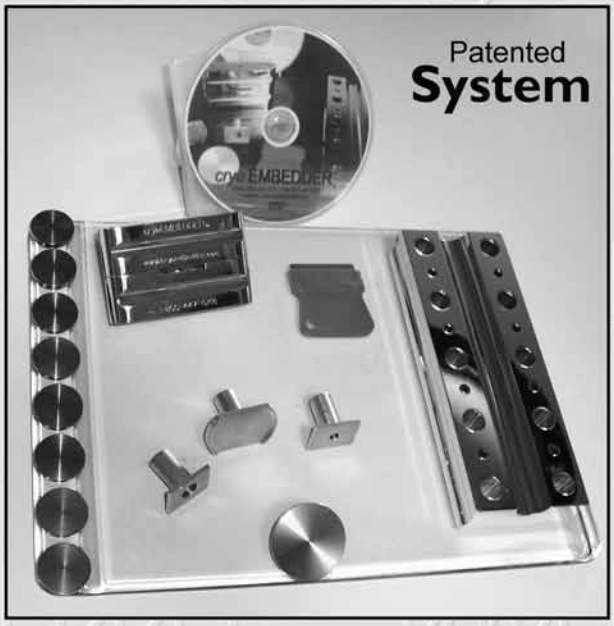
Speaker Index

Aasi, Sumaira Z., 34
Alam, Murad, 33, 34
Albertini, John G., 34
Albom, Micheal J., 29
Alcalay, Joseph, 27
Arron, Sarah, 34
Barry, Rupert B., 29, 42
Baum, Christian L., 31
Bennett, Richard G., 29, 33, 34, 43
Bentz, Michael L., 33
Bichakjian, Christopher K., 32
Billingsley, Elizabeth M., 27
Bordeaux, Jeremy S., 28
Bowman, Paul H., 27
Brewer, Jerry D., 34
Brodland, David G., 27, 31, 33
Brown, Clarence W., Jr., 31
Brown, Marc D., 29, 32
Camilleri, Michael J., 31
Campoli, Michael, 29, 45
Cartee, Todd V., 29
Chan, An-Wen, 34
Cherpelis, Basil S., 27
Coldiron, Brett M., 27, 32
Collins, Kristina M., 30, 50
Collins, Scott A. B., 29, 34
Cook, Joel, 27
Cook, Jonathan L., 33
Davey, W. Patrick, 29
Dinehart, Scott M., 29, 34
Dzubow, Leonard M., 33, 34
Eisen, Daniel B., 34
Farley, Mary F., 27
Fazio, Michael J., 34
Fisher, Galen H., 33
Francis, Joseph K., 28, 40
Gillard, Montgomery O., 34
Gloster, Hugh M., Jr., 31, 32
Goldberg, David J., 34
Goldberg, Leonard H., 29, 31
Goldman, Glenn D., 27, 33
Goldstein, Glenn D., 33
Hollmig, S. Tyler, 28, 35
Humphreys, Tatyana R., 29, 31
Hussain, S. Walayat, 33
Ibrahim, Sherrif F., 34
Ibrahimi, Omar A., 30, 47
Iorizzo, Luciano J., III, 30, 46
Jackson, Brooke A., 28
Johnson, Karen J., 28
Joseph, Aaron K., 31
Krach, Kent J., 34
Lee, Ken K., 32
MacFarlane, Deborah F., 30, 32, 33
Mahlberg, Matthew J., 28, 40
Maloney, Mary E., 34
McGinness, Jamie L., 28, 36, 41
Mellette, J. Ramsey, Jr., 27
Mendese, Gary W., 30, 49
Miller, Craig C., 28, 37
Miller, Stanley J., 31
Moore, Rachel L., 32
Mortimer, Neil J., 33
Neff, Ann G., 31
Neuburg, Marcy, 28
Nguyen, Tri H., 32, 33
O'Bryan, Kevin W., 29, 45
Olbricht, Suzanne M., 27
Omlin, Kenny J., 29, 43
Otley, Clark C., 27, 32
Parazynski, Scott E., 30
Patrinely, James R., 32
Ratner, Désirée, 31, 33
Robinson, June K., 31
Roenigk, Randall K., 32
Rohrer, Thomas E., 33
Salmon, Paul J. M., 33
Schanbacher, Carl F., 31
Schmults, Chrysalyne D., 34
Sengelmann, Roberta D., 33
Siegel, Daniel M., 27, 29
Skouge, John W., 29
Sobanko, Joseph F., 27
Stasko, Thomas, 32, 34
Strasswimmer, John M., 28, 36
Swanson, Neil A., 29
Tannous, Zeina S., 31, 33
Thomas, Valencia D., 31
Torres, Abel, 31, 34
Velez, Nicole F., 28, 37
Vidimos, Allison T., 27
Vinciullo, Carl, 27
Washington, Carl V., Jr., 33
Wentzell, J. Michael, 33, 34
Weyer, Christopher W., 30, 48
Willey, Andrea, 27
Wysong, Ashley, 28, 38
Zalla, Mark J., 32, 34
Zeitouni, Nathalie C., 32
Zilinsky, Isaac, 27
Zwald, Fiona O'Reilly, 32, 33

cryoEMBEDDER®

USED IN OVER 1,000 OFFICES INTERNATIONALLY,
The cryoEMBEDDER®

- Adapts to all makes of cryostats
- Fast turn around time
- Ergonomic design
- Add more patients to surgery schedule
- Pays for itself with one Mohs surgery
- Unlimited (800) Tech Support
- Lifetime warranty



The cryoEMBEDDER® has revolutionized the process of preparing fresh tissue for frozen sectioning.

It provides quick and precise tissue sample preparation by speeding up the embedding process and enhancing the quality of slides for diagnosis.

Mohs Training Workshop

- Courses for beginners and experienced technicians
- 3 day training: Thur., Fri., and Sat.
- Hands-on training with 10 hours cutting time
- Variety of methods demonstrated
- HT ASCP certified instructors
- Workshop fees include room, meals, and materials

3434 East 7800 South #131
Salt Lake City, UT 84121
Fax: 801-453-0187

1-800-447-0718

www.cryoembedder.com

ACMS

American College of Mohs Surgery
555 East Wells Street, Suite 1100
Milwaukee, WI 53202
Phone: (414) 347-1103
(800) 500-7224 • Fax: (414) 276-2146
Email: info@mohscollege.org
Website: www.mohscollege.org/
www.SkinCancerMohsSurgery.org