Secrets of the Experts at Meeting in Hawaii

The 33rd Annual Meeting of the American Association of Hand Surgery will be held at the Hyatt Resort in beautiful Kauai, Hawaii from January 8-11, 2003. We hope for an action-packed, timely and informative meeting. A total of 75 papers covering all areas of hand surgery will be presented. The meeting was designed so that the participants will have time off in the afternoons to spend with family in the beautiful setting of Kauai.

In addition to the multiple papers, there will be 20 instructional courses over the four days of the meeting. A wide range of topics will be covered; from congenital hand deformities, latest updates on wrist reconstruction, and vascularized bone grafts to advances in upper extremity vascular disorders and soft tissue coverage. In addition, symposiums will cover the latest updates in new frontiers in wrist arthroscopy and the controversial use of electothermal shrinkage in the hand and wrist.

A new segment, “Ask the Doctor” will also be offered. This will allow the participants in small intimate groups to observe a recognized expert performing a simulated surgical procedure. Topics include total wrist/elbow arthroplasty, internal fixation of distal radius and hand fractures, percutaneous trigger finger release and arthroscopic fixation of scaphoid fractures. This will give the opportunity for the participants to pick the minds of the experts to learn tips and tricks they may offer and to expand the discussion to any topic of hand surgery they desire in their group. This is truly an exciting new concept and we hope that it will be well received.

The theme of the meeting will be “Sports Medicine and Hand Surgery.” The opening Hand Therapy Specialty Day will focus on the concepts and treatment of upper extremity sports injuries from the elbow to the hand. Lynn Bassini and Lee Osterman, co-chairs for the Hand Therapy program have put together an excellent meeting, covering a wide range of topics in Sports Medicine from the elbow to the hand.

In addition, for those who want to fine tune or improve their computer skills, a computer workshop will be offered on Wednesday, covering such topics as PowerPoint presentations, publications, M-peg presentations and image management for...
Ten

The number 10 figures a lot in hand surgery. We have 10 fingers, and Paul Brown wrote a classic article, “Less than 10” on surgeons who were successful despite having one or more fingers amputated. It takes 10 years of medical education (if you are an orthopedist) to become a hand surgeon. The are 10 structures in the carpal tunnel. I’m in a bit of a ‘late night’ mood today, so I thought I’d put together a top ten list. Maybe you have your own top 10 ideas for something or another relating to hand surgery—if you send them in and I like them, we can publish them, too. Here goes.

Top 10 Ways to Stay Out of Trouble Clinically

10. Have the patient take responsibility for their own rehabilitation. Activity should be a part of any rehabilitation or treatment plan. Passive programs do not work. Plus this way you get a partner in rehabilitation. Probably no need to mention this to hand surgeons, but I wanted to start out easy.

9. Be sure there is data to support your choice. It is surprising how many things we do that are based on opinion or anecdote. Recently we learned that arthroscopic ‘washouts’ were no more effective than placebo for arthritis treatment. We are pretty sure that carpal tunnel release is a pretty good operation, but how about your favorite wrist ligament reconstruction?

8. Consult frequently, and work in teams. Two heads are better than one. No one knows everything, but together we know a lot. It’s easier to ask for help than to try and know (and do) it all. Macho is for movies.

7. Communicate your diagnosis, expectations, and plans clearly before as well as after treatment. Study after study has shown that most malpractice cases have their origin in a breakdown in communication, not poor results.

6. Evaluate the WHOLE patient. Work and outside activities. General health/fitness/nutrition. Social factors and attitudes. Hopefully this goes without saying, but it does appear that those doctors, their job is to fix hands (or other body parts), not people. Ultimately it is more important, as Osler famously said, to know the person who has the disease than it is to know the disease the person has.

5. Be more conservative in complex cases. As the number of involved sites and diagnoses increases, the likelihood of benefit from surgery decreases. This I heard first from Jim Strickland, a wise man. I think it’s true, and has certainly steered me from trouble in the past.

4. If faced with a choice of equally effective therapies, choose the simplest. In a way, this is a corollary of Strickland’s rule, also known as KISS: keep it simple, surgeon. Don’t make an easy job hard (my rationale for not doing endoscopic carpal tunnel releases!)

3. Do not falsely label symptoms as disease or injury. This confuses everyone. It makes doctors think they know more than they really do, and makes the patient think there is something that needs to be fixed. This in turn implies that something was broken, which then raises the questions of why, whose fault (if it is associated with work or an accident), etc. Do not medicalize an everyday ache. This I learned first from Nortin Hadler. I don’t agree with him often, but right is right.

2. Observe more; Do less. It is true that we learn from mistakes, but it is not necessary that the mistakes we learn from are our own. Wait for others to report their long term results, and don’t buy in to the early hype. There are a lot more operations that used to be done than are done.

And the number one way to stay out of trouble clinically: Always remember that the needs of the patient come first. The motto of Mayo Clinic, and the best tie breaker I know.
The Role of Sports in America, Medicine, and Hand Surgery

Humankind’s competitive nature arises from Darwinian principle, “survival of the fittest.” It affects every aspect of our individual and collective lives every day. It may range from finding enough food and water to survive the day to winning a contract, a contest, a battle, or a war. Sporting and athletic contests provide an excellent and socially acceptable outlet for spirited competition. They are an art form and a cultural activity based upon achieving pinnacles of physical performance, often with great strategy and intelligence involved. Sports stand along side of art, music, literature, and science as a venue for excellence in human expression.

In many ways, sports have become the opiate of the masses. Competitive sports are organized at various age and skill levels allowing almost everyone a chance to play. We have “Little League” for children, “Special Olympics” for disabled athletes, and the “Senior Games” for mature citizens. Recreational sports provide enjoyment and require the mastery of a skill. As a participant or an observer (“fan”, a contraction of fanatic), sports provide a physically and mentally healthy respite from the rigors of everyday life. Sports promote physical conditioning and fitness. Sports may bring us together in a venue that promotes human understanding among cultural differences. Sports have also become a major commercial entertainment industry.

Are there material excesses and moral deficiencies within athletics? Of course, just like the rest of life. It’s an imperfect world. But rules apply and ultimately, justice prevails. We strive to bridge the gap between reality and ideal. This is a “life’s lesson” in itself. In athletics, we learn more about virtues and vice. As in All I Really Needed to Know I Learned in Kindergarten: Uncommon Thoughts on Common Things (Robert Fulghum), we learn to “play fair, to share, not hit others, and clean up our own mess.” We learn about discipline, sacrifice, teamwork, perseverance, tenacity, honor, sportsmanship, a vision for a goal, and the passion and dedication necessary to achieve it. The lessons learned on the playing fields, gymnasiums, and courts in youth may be applied to the challenges of later life. Healthy competition performed with good sportsmanship improves us all. It teaches us to try to be the best we can be. Sports have given many an opportunity to rise out of poverty or a disadvantaged life. They do have social value.

Vince Lombardi said, “Winning is not the most important thing, it’s the only thing.” Grantland Rice said, “It’s not whether you win or lose, it’s how you play the game.” Kipling wrote, “Winning and losing are two imposters that should be treated just the same.” Martina Navratilova said, “People who say it doesn’t matter whether you win or lose, usually lost.” A sign in my high school locker room said, “A quitter never wins and a winner never quits.” Each of these views contains a message, a grain or more of truth, an inspiration. But I agree with John Wooden (They Call Me Coach) who stated that success (“winning”) is “the satisfaction of knowing that you have done your best.” We value our stars, but we value our “Rudys” as well. It is better to have tried and lost than to never have tried at all. September 11, 2001 will forever be etched in each of our minds as an example of what true heroism is all about.

As physicians and surgeons, we can have many victories every day. We can win as we endeavor to be better spouses, better parents, better friends, better physicians, and better citizens of our communities. We win when we provide a kind word or a word of encouragement to a patient, their family, a student, or resident. A technically successful operation is a victory. Restoring a patient to independent living, gainful employment, the playing field, recreation, child-care, or family and household responsibilities is a triumph. And when we fail, we try again.

Throughout history, many of the advances in the treatment of diseases, wounds, and injuries have come from the battlefield and, more recently, from our inner cities where poverty, ignorance, fear, drugs, and alcohol combine to create a primitive and often violent environment. Sports more recently have become an equally fertile ground for development in physiology, nutrition, injury prevention, surgical techniques, and rehabilitation.

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AS PHYSICIANS AND SURGEONS, WE CAN HAVE MANY VICTORIES EVERY DAY. WE CAN WIN AS WE ENDEAVOR TO BE BETTER SPOUSES, BETTER PARENTS, BETTER FRIENDS, BETTER PHYSICIANS, AND BETTER CITIZENS OF OUR COMMUNITIES.

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Winter 2003

continued on page 4
Advances in strengthening and conditioning, improved protective equipment (headgear, specialty gloves, playing orthoses), magnetic resonance imaging (MRI’s), arthroscopic surgery, and internal fracture fixation have taken their place along side of modern stadiums, free-agency, corporate sponsorship, and the sports labor movement in ushering in the modern era of sports.

Join us at the 33rd Annual Meeting in Kauai, Hawaii, from January 8-11, 2003. There will be a rich venue of educational, social, and recreational opportunities. The meeting will open with our combined Hand Therapists and Physicians Symposium, “Diagnosis, Treatment, Rehabilitation, and the Early, Safe Return to Play of the Hand Injured Athlete” and conclude with our Guest Presidential Speaker, Art Rettig, MD, Indianapolis Colt Team Physician, addressing “Hand Injuries in the NFL.”

Many aspects of the care provided to athletes extrapolate to improvements for the general public as well. So, “Hang Ten.” Come, contribute, and participate in the festivities.

LEADERSHIP PROFILE

President-Elect Allen L. Van Beek, MD

Allen L. Van Beek, MD is in private practice in Minneapolis, MN and teaches Hand, Micro, and Plastic Surgery through the Plastic Surgery training program at the University of Minnesota. He completed training programs and attained certification in General Surgery, Hand and Microsurgery, and Plastic Surgery. While having authored dozens of periodical publications, educational videos, educational CDs, chapters, and courses, he feels the most important things health care providers do are related to their family and the many patients that have entrusted him with their health care.

As one of the leadership team members for the Association, prior experience as president of the Am Soc Reconst Microsurgery, Am Soc Peripheral Nerve, Minnesota Society Plastic Surgery, and Southern Minnesota Medical Society have provided insight into the diversity of membership opinions and the complexity of issues facing the membership. Dr. Van Beek also serves as the Vice President for the Plastic Surgery Educational Foundation and Senior Examiner for the American Board of Plastic Surgery.

As 2003-2004 President of the AAHS, his most important goals will be to continue the Association’s excellent tradition of pairing a learning experience with recreational fun. Expect the implementation of additional teaching methods and tools. A second and more complex goal is to continue the process of making the Association more global and diverse in its programs, Association affiliations and membership outreach. A third goal will be to explore and establish potential methods of assuring broad access to specialty care physicians by managed care patients along with fair reimbursement for procedures performed by hand surgeons. Dr. Van Beek believes that professional organizations are essential to assuring that hand surgeons throughout the world continue to provide compassionate excellence in their care giving.

Commensurate with that belief, he asks members—especially younger members—to volunteer and help with AAHS’s educational, committee and board functions. If you are interested in volunteering to help, contact Dr. Van Beek at plsurgery@aol.com or the Association’s management office in Chicago at handsurgery.org.

FROM THE PRESIDENT

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7th Annual Day at the Links Golf Tournament
being held in conjunction with the AAHS and ASRM Annual Meetings
Saturday, January 11, 2003
12:30 pm Departure
Price: $150.00

The shotgun tournament will be held at the Poipu Bay Resort Golf Course. You’ll enjoy stunning ocean vistas from every hole. This Robert Trent Jones, Jr. masterpiece offers an ideal setting from individual players to tournaments.

Tournament fees include lunch, greens fees, cart rental and range balls. Please note the club is a spikeless facility and metal spikes are not allowed.

Prizes will be awarded to the team with the lowest gross score in addition to the longest drive, longest putt and closest to the pin. Tournament registration will officially close on FRIDAY, January 10, 2003 AT 4:00 pm. All pairings should be done on site in the pro shop. Golfers are encouraged to submit completed foursomes to the golf pro shop.

To sign up or for more information, call 312-236-3307.
### Program at a Glance

**Hand Therapy Specialty Day**  
**Wednesday, January 8, 2003**  
**Concepts in the Treatment of Upper Extremity Sports Injury: From the Elbow to Hand**

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>6:00-7:30 am</td>
<td>Continental Breakfast</td>
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<tr>
<td>7:00-7:05 am</td>
<td>President’s Welcome, Alan Freeland, MD</td>
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<td>7:06-7:10 am</td>
<td>Program Chair Welcome, William Geissler, MD</td>
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<td>7:11-7:15 am</td>
<td>Hand Therapy Program Co-Chair Welcome, Lynn Bassini, PT, OT, Lee Osterman, MD</td>
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<tr>
<td>7:15-7:30 am</td>
<td>The Epidemiology of Hand, Wrist, Elbow Injury in Sports, Peter Amadio, MD</td>
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<tr>
<td>7:31-7:40 am</td>
<td>Diagnosis and Treatment, Mukund Patel, MD</td>
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<td>7:41-7:50 am</td>
<td>Rehabilitation, Lynn Bassini, PT, OT</td>
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<td>7:51-8:00 am</td>
<td>Diagnosis and Treatment, Mark Cohen, MD</td>
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<td>8:01-8:10 am</td>
<td>Rehabilitation, Aviva Wolff, OT</td>
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<td>8:11-8:20 am</td>
<td>Diagnosis and Treatment, Dean Sotearenos, MD</td>
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<tr>
<td>8:21-8:30 am</td>
<td>Rehabilitation, Sue Blackmore, MS, OTR, CHT</td>
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<td>8:31-8:44 am</td>
<td>Case Presentations &amp; Questions, Arif Scaphoid Fracture Joe Slade, MD</td>
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- **Avulsion Injuries: Why Won’t It Bend?**  
  **Moderator: Nash Naam, MD**

- **Flexor Digitorum Profundus Avulsion-Jersey Finger**  
  By Lee Osterman, MD

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<th>Time</th>
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<tr>
<td>8:56-9:05 am</td>
<td>Arif Distal Radius Fracture Will Geissler, MD</td>
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<td>9:06-9:15 am</td>
<td>Ligament Injuries-Gymnast’s Wrist Richard Berger, MD</td>
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<td>9:16-9:25 am</td>
<td>TFCC Injuries David Rich, MD</td>
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<td>9:26-9:35 am</td>
<td>Rehabilitation Terri Skirven, OTR, CHT</td>
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<td>10:00-10:15 am</td>
<td>Break Tennis Elbow, Anyone?</td>
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<td>10:15-10:30 am</td>
<td>Is There a Scientific Rational for the Treatment of Elbow Tendonitis? Kevin Plancher, MD</td>
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<td>10:31-10:45 am</td>
<td>Arthroscopic Treatment of Tennis Elbow Mark Cohen, MD</td>
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<tr>
<td>10:46-11:00 am</td>
<td>Golfer’s Elbow—Medial Epicondylitis Brassi Sennett, MD</td>
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<tr>
<td>11:01-11:15 am</td>
<td>Rehabilitation of Elbow Tendonitis Stretch or Curl Sue Michlovitz, PT, PhD</td>
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<td>11:16-11:30 am</td>
<td>Is There Light at the End of the Radial Tunnel? Lee Dellon, MD</td>
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- **Nerve Injuries in Sports**

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<th>Time</th>
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<tr>
<td>11:31-11:37 am</td>
<td>Hand and Wrist: Thumb Bowler’s/ Cyclist’s Palsy Brian Adams, MD</td>
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<tr>
<td>11:38-11:45 am</td>
<td>Nerve Injury about the Shoulder John Bednar, MD</td>
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<tr>
<td>11:46-11:55 am</td>
<td>Rehabilitation of the Injured Nerve Christine Novak, PT, MS</td>
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<tr>
<td>12:00-1:00 pm</td>
<td>Working lunch</td>
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<tr>
<td>12:00-12:14 pm</td>
<td>How Your Sport Rates in Keeping You Fit Lee Osterman, MD</td>
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- **Decision Making**

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<tr>
<td>12:16-12:25 pm</td>
<td>Hand Fractures in the Large Sports Medicine Practice Shannon Singletonary, MD</td>
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<td>12:26-1:00 pm</td>
<td>Protective Splinting and Hand Gear for the Athlete at All Levels of Play Presidential Guest Speaker Art Retting, MD</td>
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<td>1:01–1:15 pm</td>
<td>When Can I Play? Managing the In-Season Injury Specialty Casts, Braces, Gloves and Taping Ronald Palmer, MD Gregory L Gaa, MS, ATC-L, CSCS</td>
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<td>1:00–2:15 pm</td>
<td>Instructional Courses</td>
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<td>1:00–2:15 pm</td>
<td>Instructional Courses</td>
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- **Arthroscopic Management of the Athletic Wrist**
  **Moderator: Brian Adams, MD**

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<th>Time</th>
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<tr>
<td>104 Management of Rheumatoid Hand and Wrist Anthony De Santolo, MD</td>
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**Thursday, January 9, 2003**

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<th>Time</th>
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<tr>
<td>105 Congenital Hand Sheila Lindley, MD</td>
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<td>106 Wrist Reconstruction Gunter Gorman, MD</td>
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<tr>
<td>107 Vascularized Bone Grafts Allen Bishop, MD</td>
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<tr>
<td>108 Advances in Upper Extremity Soft Tissue Coverage William Lineaweaver, MD</td>
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<tr>
<td>109 Updates on Basilar Joint Arthritis Lee Osterman, MD</td>
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- **Concurrent Scientific Paper Session A-1**

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>8:30-8:36am</td>
<td>Locked Percutaneous Intramedullary Nailing of Metacarpal and Phalangeal Fractures Jorge Orbyay, MD</td>
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<tr>
<td>8:37-8:43am</td>
<td>Motion Influencing Factors in Digital Fractures David J. Slutsky MD, FRSC(C)</td>
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<tr>
<td>8:44-8:50am</td>
<td>Acute vs Delayed Treatment of Open Distal Phalanx Fractures Arshad R. Musaffar, MD</td>
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<td>8:51–8:57am</td>
<td>A New Dynamic Spring Distraction Device in the Treatment of Proximal Interphalangeal Joint Fracture Dislocation John LoGuidice, MD</td>
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- **Instructional Courses**

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<th>Time</th>
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<tr>
<td>1:05–9:11 am</td>
<td>Discussion continued</td>
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**Program at a Glance**

**Hand/Wrist Fractures**
9:12–9:18 am Long-Term Results of Management of Gun Shot Wounds to Proximal Interphalangeal Joints Using External Fixator
B. Balakrishnan, MD

9:19–9:25 am Sports Casting of the Upper Extremity In-Season Athlete
Ronald E. Palmer, MD

Jorge Orbay, MD

9:33–9:39 am Palmar Plating for the Fracture of the Distal Radius
Masaaki Yamano, MD, PhD

9:40–9:46 am Treatment Outcome of the Triamed System for Displaced Intra-Articular Distal Radius Fractures
Kevin Chung, MD, MS

9:47–9:53 am Discussion
Wrist
9:54–10:00 am Management of Dorsal Radiocarpal Ligament Tears
David J. Slutsky, MD, FRCS(C)

10:01–10:07 am A Salvage Operation for Kienbock’s Disease with Unsuccessful Radial Osteotomy: Three Case Reports of a Vascularized Bone Graft Combined with Capitate Shortening and Capitohamate Fusionapitate Shortening
Ryosuke K. Akinoki, MD, PhD

10:08–10:14 am Outcome Assessment of Wrst Denervation—A Review of 84 Patients
Michael Sauerbier, MD, PhD

10:15–10:21 am Stability of Scaphoid Waist Fractures in Response to Forearm and Wrist Rotation and the Role of the Radioscaphocapitate Ligament
Timothy R. McAdams, MD

10:22–10:28 am Injury to the Dorsal Branch of the Ulnar Nerve in the Arthroscopic Repair of Ulnar Sided Triangular Fibrocartilage Tears Using an Inside-out Technique: A Cadaveric Study
Timothy R. McAdams, MD

10:29–10:35 am Discussion

**Concurrent Scientific Session A-2**

**Tendons**
8:30–8:36 am Cerebral Reorganization Following Flexor Tendon Lesion of the Fingers
J. Henk Coert, MD

8:37–8:43 am Biomechanical Analysis of Swan Neck Tendency in Two-Stage Flexor Tendon Grafts
Shrikant J. Chinchalkar, BScOT, OTR, CH

8:44–8:50 am Reduction Flexor Tenoplasty for Repair of the Flexor Tendon Using Large Core Suture: a Biomechanical Cadaver Study
Houshang Seraghi, MD

8:51–8:57 am Improved Technique of Reconstruction of the Finger Distal Extensor Aponeurosis by Dermal Bandelets
Alexandra V. Georgeacu, Prof

8:58–9:04 am Endoscopic Trigger Finger Release
Tyson Cobb, MD

9:05–9:11 am Discussion

**Carpal Tunnel Syndrome**
9:12–9:18 am Percutaneous Trigger Finger Release Using a New Push Knife
Michael John Dunn, MD

9:19–9:25 am Scapho-trapezial Synovitis as a Cause of Prolonged Pain after Carpal Tunnel Release
Hooman Soltanian, MD

9:26–9:32 am Eleven Year Follow-up of the Distal Single Incision Scope Assisted Carpal Tunnel Release
M. Athir Mirza, MD

9:33–9:39 am A Meta-Analysis of Randomized Controlled Trials Comparing Endoscopic and Open Carpal Tunnel Decompression
Achilles Thoma, MD, FRCS(C)

9:40–9:46 am Carpal Tunnel Surgery in the Elderly
Mark F. Hendrickson, MD

9:47–9:53 am Discussion

**Basic Science**
9:54–10:00 am Wrist Flexor Spasticity Results in Dramatic Muscle Sarcomere Lengths
Richard Lieber, PhD

10:00–10:07 am Spastic Muscle Cells Are Shorter and Stiffer Than Normal Cells
Richard Lieber, PhD

10:08–10:14 am Effects of Tgf-Beta on Flexor Tendon Wound Healing
Matthew Klein, MD

10:15–10:21 am Local Application of Low Molecular Heparin in Crush Injuries: an Experimental Study in Rats
Yi-Hui Yan, MD

10:22–10:28 am Long-Term Outcomes in Surgical Rehabilitation of the Upper Limb in Tetraplegia
Vincent R. Hentz, MD

10:29–10:35 am Discussion

10:29–11:00 am Break

11:00–11:30 am President Invited Speaker
“History of Hand Surgery in Venezuela”
Anthony DeSantolo, MD

**Friday, January 10, 2003**

6:00–7:00 am Coffee

7:00–8:15 am Instructional Courses
110 The Elbow
Mark C. Cohen, MD

111 New Frontiers in Wrist Arthroscopy
David Slutsky, MD

112 Use of Electrothermal Shrinkage in Hand & Wrist
Steven Topper, MD

113 Upper Extremitv Vascular Disorders
Neal Jones, MD

114 Management of Acute/Chronic Flexor Tendon Injuries
Scott Keizn, MD

**Concurrent Scientific Paper Session C-1**

**Wrist**
8:30–8:36 am Capsulodesis for Chronic Scapholunate Dissocation
Steven L. Moran, MD

8:37–8:43 am The Outcome of Isolated Lunotriquetral Interosseous Ligament Tears Treated by Ulnar Shortening Osteotomy
M. Athir Mirza, MD
ARTICLE III – Membership

SECTION 12 – ADMISSION TO MEMBERSHIP

The American Association for Hand Surgery will act upon membership applications twice a year. The deadlines for receipt of membership applications will be May 1 and November 1 of each year or the first working day thereafter. The Membership Committee will then process the applications and forward their recommended new members ballot to the Board of Directors and the Active Membership by June 1 and December 1 of each year or the first working day thereafter.

Objections to any applicant must be received in writing by the Membership Committee Chair by July 1 or January 1 or the first working day thereafter. The Membership Committee Chair will forward any and all objections to the Board of Directors for deliberation at their mid-year or annual meeting. Recommendations may be made by the Membership Committee.

The Board of Directors will act upon the membership ballot at their mid-year meeting and at the first board meeting at the annual meeting. The Board of Directors will decide what action to take regarding applicants’ against whom an objection has been filed. There will be no further discussion of new applicants following the action of the Board of Directors.

Applications approved for membership will be referred by ballot to the Active membership. Active members will be given thirty (30) days to cast their ballot. Newly elected members will be notified in writing of their election and their names will be published in the Hand Surgery Quarterly.

ARTICLE V – Board of Directors

SECTION 1 – COMPOSITION

The Board of Directors shall consist of seven (7) officers (and the Treasurer-Elect during his/her year of tenure), the two (2) immediate Past Presidents, the four (4) Directors-At-Large, the Hand Therapy Director, and the Junior and Senior Affiliate Directors Chair and Vice Chair of the Hand Therapy Committee, who will act as Affiliate Directors. The Chair of the Hand Surgery Endowment shall serve as a non-voting member participant at the Board of Directors annual meeting and at other meetings of the Board of Directors at the discretion of the president.

SECTION 8 – Election Rotation

The Vice-President, the Historian, Junior Affiliate Director Vice-Chair of the Hand Therapy Committee and two (2) Directors-At-Large shall be elected every year. Of the two directors, one shall be an active member for more than seven (7) years and the other, not more than seven (7) years. The Senior Affiliate Director will succeed to the position of Hand Therapy Director for a one (1) year term. The Secretary and the Treasurer/Finance Committee Chair will be elected every three years. The Treasurer-Elect will be elected in the final year of the Treasurer’s term.
e-mails. I am sure this will be a well-received and informative course.

Peter Weiss, MD, the Keynote Speaker, will talk about innovations in hand surgery. Dr. Weiss has been quite instrumental in the development of a number of medical products. We look forward to learning from his experience in working with various medical companies in product development. In addition, Peter is an expert on coin collecting and will have an excellent presentation on the history of hands found on coins.

Antonio DeSantola will be our international guest speaker and he will inform us on the development of hand surgery in Venezuela. This is a very interesting topic, as the history and development of hand surgery in South America is quite fascinating.

The meeting will conclude on Saturday with Art Rettig, M.D., the team physician for the Indianapolis Colts. He will deliver the Presidential Address on hand injuries in the NFL. He has over 18 years experience in treating upper extremity sports medicine injuries with the NFL. He will recommend treating protocols, including safe return to competition. He will also discuss the interesting role of a team physician and how it has changed over the past 18 years.

Please mark your calendars for the 33rd Annual Meeting in Kauai, Hawaii. This will truly be an exciting, comprehensive meeting covering all areas of hand surgery. In addition to an informative meeting on the latest topics of hand surgery, there will be ample time for enjoying the beautiful scenery of Hawaii. Please bring your family and don’t miss it!

I look forward to seeing you there.

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**THE DIGITAL HAND SURGEON**

The USB Evolution

Just when the iMac has launched its campaign for true plug ‘n’ play technology, the PC world is rocking with USB (Universal Serial Bus). One look at the back of your computer is like an archeological expedition into connectivity standards. Like an old building, there are relics of the past and present like PS/2, serial, parallel, and SCSI I/O sub-systems. Standards evolve in the technology world with Darwinian principles respecting speed above all else, and USB seems to cut muster in this regard.

Early version digital cameras transferred data to the computer through the painfully slow serial port. The IEEE 1394 improved matters nicely with 400-Mbps throughput, but never reached ‘critical acclaim’ to become a standard PC feature. Yet, it was easily installed post-production with a card and cable. USB 2, on the other hand (evolved from USB 1.1) has reached acclaim and emerged as the PC connectivity icon. It is small, and speedy, peaking out at data transfer rates north of 480 Mbps. As such, a huge variety of peripheral manufacturers now sell hardware with USB connectivity. (See http://www.usb.org/app/search/products/)

“USB is the solution for any PC user who has ever dreamed about an instant, no-hassle way to connect a new digital joystick, a scanner, a set of digital speakers, a digital camera, or a PC telephone to their computer.”

Two additional and most noteworthy features of USB are “hot-swapping” and “daisy chaining.” Hot swapping permits you to “start” a peripheral simply by plugging it in and to “stop” the device electronically with a mouse click and without an annoying, time-consuming re-boot. Daisy chaining means that multiple peripherals can ‘hang’ off the same port. Replication hubs are cheap and easy so that a single USB computer port can support multiple devices simultaneously. For example, a typical digital photo setup might include a direct camera USB port, a USB mouse with memory stick drive for downloads, and a mass storage hard drive for backups.

Getting your hands around this technology is well worth the minimal effort for both professional and personal use.

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**W. P. Andrew Lee, MD, has been awarded the 2002-2003 Sterling Bunnell Traveling Fellowship from the American Society for Surgery of the Hand.**

**Scott Kozin, MD, was elected to the American Society for Surgery of the Hand Council as a Member-at-Large.**

**People in the News**

People in the News is dedicated to recognizing the accomplishments of AAHS members and their families. Submissions should be sent to the AAHS Central Office at vetter@isms.org, and will be included on a space available basis.
The AAHS Research Grant Awards were established to further the purpose of the Association as stated in its Bylaws and to foster creativity and innovation in basic and/or clinical research in all areas pertinent to hand surgery.

Awards and Eligibility

Grants will be made for a one year period to up to three investigators. Grants are available to all AAHS members. One of the investigators must be an active or affiliate member of the association.

Grant Application

Applications may be obtained from: American Association for Hand Surgery
20 N. Michigan Avenue, Suite 700
Chicago, Illinois 60602

Applications (an original plus seven copies) must be received by the committee chair no later than Monday, November 3, 2003, in order for the judging to be completed in time and the recipients to be announced at the Annual Meeting.

The AAHS and the Research Committee are required by the IRS to document disbursement of grant funds. Award recipients will be required to sign a letter of acceptance and submit a progress report once each year. The AAHS must be acknowledged as the source of funding in any presentation or publication. A final report must be submitted at the completion of the study. It is expected that the results of the funded research be submitted for presentation at an Annual Meeting within two years of the receipt of the award.

Funds must be returned to the AAHS if the study is not undertaken within twelve months of the receipt of the award. Failure to follow these guidelines will disqualify the recipient from any further grant opportunities and from presenting any papers at the AAHS Annual Meeting for a period of three years following such default.

Mail Grant Proposals to

Saleh M. Shenaq, MD
Baylor College of Medicine
6560 Fannin Street, Suite 800
Houston, TX 77030
Small Joint Arthrodeoses

Small joint arthrodesis is typically one of the more common procedures performed in the hand. Although a lot of surgeons consider fusion a salvage operation, it predictably provides a stable and pain-free joint in situations where mobility is difficult to maintain. Arthrodesis truly serves as a benchmark against which all other procedures, especially arthroplasty, have to be measured.

Our moderator is Rocco Barbieri, MD, Director, Hand & Microvascular Division, Southern Bone & Joint Specialists, Hattiesburg, MS. Joining him on the panel are hand surgeons John Capo, MD, Assistant Professor; Chief, Hand & Microvascular Surgery, UMDNJ-New Jersey Medical School, Michael Neumeister, MD, FRCSC, FACS, Associate Professor, Program Director Plastic Surgery, Southern Illinois University, Springfield, IL, and Robert R. Slater, Jr., MD, FACS, The Permanente Medical Group, Sacramento, CA, and Assistant Clinical Professor, Hand and Upper Extremity Surgery Division, Department of Orthopaedic Surgery, University of California, Davis, Sacramento, CA, and hand therapist Julie Falla, OTR/L, CHT, Southern Bone & Joint Specialists, Hattiesburg, MS.

Dr. Barbieri: Dr. Capo, what do you see as the most common presentation for a person who requires a DIP joint fusion?

Dr. Capo: Typically it is an elderly female with painful arthritis in the DIP joints that is causing difficulties with day-to-day activities. There’s a combination of pain, malalignment and appearance problems, such as deviation and nodularity (osteophytes, mucous cysts) that bring the patients to the office.

Dr. Barbieri: How do you differentiate between those in which you treat the mucous cyst alone and those in which you go ahead and fuse the joint?

Dr. Capo: I think if a mucous cyst presents with arthrosis and pain, a fusion is definitely part of the treatment regimen. Dr. Capo: I think if a mucous cyst presents with arthrosis and pain, a fusion is definitely part of the treatment regimen. The surgical approach in this instance may have to be altered to include a rotation flap. This depends primarily on the condition of the skin surrounding the mucous cyst.

Dr. Barbieri: What’s your typical surgical approach when fusing a DIP joint?

Dr. Capo: My exposure to the dorsum of the DIP joint is a ballooned out Y incision. The V portion of the Y looks more like a broad U. This allows me to look at the terminal tendon, the DIP joint and the germinal matrix because they’re only a few millimeters from each other. I’ll flip the skin flap distally and actually sew it to the nail plate to allow me to get a good look at the pathology.

Dr. Barbieri: How do you treat the extensor tendon?

Dr. Capo: I incise it transversely and flip it back and do whatever work I’m going to do. And I think it is also important to repair it for soft tissue coverage and also to prevent any late extensor problems or imbalance.

Dr. Barbieri: Dr. Slater, do you also use a Y incision?

Dr. Slater: No. I use a step cut incision with the transverse limb centered dorsally over the DIP flexion crease and then extend one limb proximally and one limb distally so it’s a step cut. I try to keep the limb that’s going proximally off of the border of the hand, that is off the ulnar border of the small finger or the radial border of the index finger.

Dr. Barbieri: How do you treat the extensor tendon with the step cut approach?

Dr. Slater: I do a transverse division of the extensor tendon and flip one flap proximally and one distally, and then use those flaps for closure following the arthrodesis.

Dr. Barbieri: And you repair that in order to make sure there’s not a Swan Neck deformity later?

Dr. Slater: Correct.

Dr. Barbieri: I typically utilize a dorsal H approach for an arthrodesis and split the extensor tendon with the skin incision. I find it gives me thick flaps and I don’t have problems with the wound breaking down. Later, when repairing the skin, I perform a ring stitch.

Dr. Neumeister, do you see a lot of wound breakdowns when you operate around that area of the joint?

Dr. Neumeister: I haven’t seen that with a simple fusion. I have seen that with a DIP ganglion which has a very thin skin covering. I don’t see the purpose of going after the cyst wall. The osteophyte is the important pathology to remove since that is what initiates the ganglion.

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AROUND THE TABLE

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Dr. Barbieri: Dr. Capo, could you explain how you prepare the joint surface for a fusion? Do you consider using motorized instruments?

Dr. Capo: In the DIP joint, it pretty much comes out to be a cup and cone. There is not a lot of bone distally if you’re trying to maintain the germinal matrix. I use a rongeur and try to create a concave cup distally and a convex cone proximally.

Dr. Barbieri: Dr. Slater, could you comment on your technical approach to a DIP fusion? Please mention the angle that you typically fuse these joints at.

Dr. Slater: For DIP joints, I usually will use a cannulated screw. One that’s just come out recently for general use, called Twin-Fix, is made by Stryker-Leibinger (Kalamazoo, MI). Therefore zero degrees is the only option because it allows one to place a guide wire down the shaft of both the distal and middle phalanges. I use an oscillating saw and make straight cuts that allow an adequate surface area for compression.

Dr. Barbieri: How big is that screw?

Dr. Slater: The trailing threads are 4.1 millimeter in diameter and the shaft is about 2.5 mm in diameter. So there’s no room for error, but it’s beautiful because you have very nice, solid compression.

Dr. Neumeister: So it’s a headless screw.

Dr. Slater: Yes, it has separately rotating proximal and distal threads.

Dr. Barbieri: I would like to mention a cadaveric study that demonstrated that the average thickness of the DIP joint is about 3-1/2 millimeters. Occasionally I see that as a big obstacle with screw fixation, especially in smaller individuals. If you use a standard Herbert screw, or even some of the newer headless screws, you’ll actually tear up the sterile and germinal matrix while placing the screw across the distal phalanx. This most certainly will cause a nail deformity. Dr. Neumeister, what is your experience?

Dr. Neumeister: Yes, I tend to use the cup and cone and I’ll use the rongeur instead of power tools for the most part. More importantly, although the cartilage may be worn away in these arthritic joints, the subchondral bone must be rongeured back to good cancellous bone to increase your union rate. I like to have more of an angle in the ulnar DIP digits than I would the index. I like the angle down to around 20 degrees of flexion, or possibly even 30 degrees for the little finger.

Dr. Barbieri: Do you find that when you placing a screw across the DIP joint into the shaft of the middle phalanx, the cortical bone will have a tendency to extend that fusion so it’s no longer at an angle?

Dr. Neumeister: I use two crossed 0.035-inch K wires.
Dr. Barbieri: How long do you leave the K wires in?

Dr. Neumeister: For about six weeks. I don’t wait for the radiographic appearance of fusion. I will likely not actually see the radiographic evidence of bony union by six weeks, but clinically, it’s been pretty solid. If the pins are loose before 6 weeks, I’ll remove them.

Dr. Barbieri: If they come out a little early, do you use a splint to protect the fusion?

Dr. Neumeister: I have an isolated splint for the DIP joint that our therapist manufactures to protect it for an extra couple of weeks.

Dr. Barbieri: Ms. Falla, on the topic of post-operative splinting of DIP fusions, could you explain how you approach someone who comes in with a DIP fusion?

Ms. Falla: Sometimes it’s quite challenging with hardware sticking out of the finger; however, a volar gutter splint can usually be made to support the DIP nicely, leaving the non-involved joints free. Sometimes, patients have a problem with skin breakdown around the DIP, and in that case we try to alternate between a volar and a dorsal gutter splint.

Dr. Barbieri: Dr. Slater, I often won’t see bone bridging the area of fusion in the small joints of the hand until about ten or twelve weeks. When would you let a person start returning to his usual activities following a DIP fusion?

Dr. Slater: I typically splint the entire hand, leaving the thumb free for the first ten days after surgery to keep the hand quiet and keep the wound in good condition. But after that, splinting just the involved finger joint is best. It’s important to protect that particular joint during the entire ten to twelve weeks. Having said that, when patients are allowed to return to “regular activities” depends a little bit on what those particular activities are.

Dr. Barbieri: Dr. Slater, here in Mississippi, we have a lot of chicken plants. How long would you tell the employer to expect one of the factory workers to be out following a small joint fusion?

Dr. Slater: If they’re doing high force, high repetition activities, then that’s three months out of work, at least with that particular hand. If the employer doesn’t have any way to accommodate patients with the restrictions specified, then that’s the length of time to expect being out of work.

Dr. Barbieri: Dr. Capo, is that also your approach?

Dr. Capo: Yes, I splint the finger initially post-op, for one to two weeks and if I can, I leave as many digits out as possible. I then will splint the digit with an isolated splint. Often with these cannulated screws, it is thought that you don’t need to splint them. But I think it still makes good sense to put an isolated volar splint across their DIP joints just to prevent any rotation.

Dr. Barbieri: Dr. Capo, you mentioned that you often use screw fixation. What do you do in a case when you’ve put the screw in and it has no purchase and there’s still a little bit of toggle?

Dr. Capo: If intra-op I don’t have fixation that’s adequate, I usually will back that screw out and switch to a cross K wire technique. I’d rather take the screw out and get some kind of cross fixation with K wires to provide some initial stability so it’s got a better chance of healing.

Dr. Barbieri: That has been my experience as well. Multiple studies have supported the notion that the stronger the fixation device—as you move from K wires to tension band to screws to plates—the higher the fusion rate. This is providing one achieves good bone coaptation and adequate stability.

Dr. Slater: Can you talk about the PIP joint? When do you decide to fuse the PIP joint vs. performing joint replacement arthroplasty?

Dr. Slater: Until recently, the options for arthroplasty for the PIP joint have been fairly limited. Recently, there have been some new devices, but I still think that those are best reserved for a non-border digit. In most cases, an arthrodesis is still the best option for the PIP joint, especially for the index and small fingers.

Dr. Barbieri: Dr. Neumeister, is that your approach as well?

Dr. Neumeister: It is for the most part—for the young person, for the laborer. But I have done arthroplasties on border digits instead of arthrodesis in low-demand patients.

Dr. Barbieri: I would consider replacing the PIP of the small and the ring fingers while fusing the index finger in the appropriate candidate. Sacrificing motion of the PIP joint in the small digit significantly impairs grip and I often will favor arthrodesis over arthroplasty. The index finger participates in pinch and the lateral stresses often lead to early failure when performing replacement arthroplasty. Whether I tend to replace or fuse the middle finger PIP joint often depends on the condition of the other PIP joints in the patient.

Dr. Capo: What position do you normally fuse the PIP joints at?

Dr. Capo: The traditional angles that I have used for PIP joints start with the index finger at 40 degrees and go up by 5 degrees to 55 in the small. However, when I look back at some of my results, I think I fuse them perhaps 5 degrees less than that because I think it’s important

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that they can get their hand into a pocket and also lay their hand flat at times.

**Dr. Barbieri:** And is your surgical approach similar to the DIP joint?

**Dr. Capo:** For a fusion, I’ll split the extensor mechanism right down on the central slip. Then I’ll actually elevate it off and elevate the collateral ligaments from both sides. Next, I will shot-gun the joint into flexion and then do my bony work.

**Dr. Barbieri:** How do you deal with the extensor tendon at the end of the operation?

**Dr. Capo:** I’ll bring it back up, repair it with a non-absorbable stitch and actually invert those stitches so they’re against the bone.

**Dr. Barbieri:** Dr. Slater, is your approach similar?

**Dr. Slater:** I also use a longitudinal incision. At the end I’ll use a non-absorbable suture in a running fashion to close that central split in the extensor tendon mechanism so that rather than having several different knots that patients can feel, it’s simply a running suture.

**Dr. Barbieri:** Dr. Neumeister, how do you prepare the bone in these cases? Do you prepare a cup and cone for these patients. For some of the traumatic arthritis PIP joints, I’ll use beveled osteotomies and then use a tension band technique. You have to make sure the osteotomy cuts are true in the AP and lateral planes to prevent any rotational deformity. It has to be right on, especially on the middle digits.

**Dr. Barbieri:** In what circumstances would you consider adding a bone graft to your fusion?

**Dr. Neumeister:** I don’t usually need bone grafts for the small joint arthrodeses. With more severe trauma and bone loss, grafts may be required. I’ll use the distal radius to get bone graft if I need it.

**Dr. Slater:** I adopt a similar approach, except that I would add that sometimes another good source of bone graft would be the proximal ulna.

**Dr. Barbieri:** Dr. Capo, a couple of authors have talked about addressing the volar plate, especially if there is significant bone loss. It seems the volar plate can get in the way of actually being able to coapt the bone surfaces. Have you ever encountered this situation?

**Dr. Capo:** Yes, I think it can get in the way. The collateral ligaments can also be a problem. Usually, I just reflect them, but you can excise them. With the volar plate, I usually reflect it off the proximal phalanx from the dorsal approach. This allows you to do your bone cuts more precisely.

**Dr. Barbieri:** Dr. Slater, when addressing a osteoarthritic patient with end-stage PIP joint involvement, what is your fixation technique of choice?

**Dr. Slater:** In most cases, a cannulated screw is commonly selected as a primary option. For revisions or cases where you might have more bone loss, then plate fixation with a very low profile plate has proven very successful.

**Dr. Barbieri:** Do you use a headless screw in this group of cases?

**Dr. Slater:** I do use a headless screw. There have been a couple that have been on the market. The Twin-Fix,
available from Stryker-Leibinger, allows you to place the implant precisely by first drilling a guide wire into position and being happy with that on intra-operative fluoroscopy views. Then you overdill the guide wire and implant the fixation device.

Dr. Barbieri: Have you ever had instances where you’ve been too close to the head of the proximal phalanx and propagated a crack that interferes with the screw purchase?

Dr. Slater: I’ve seen that beginning to develop and that might be one case where after you’ve done your bony resection, it’s important to keep the little tiny bits of the bone that is resected to pack as graft behind the screw after it is fully seated.

Dr. Barbieri: Ms. Falla, what is your post-op therapy regimen following a PIP fusion, mentioning specifically the problem of hypersensitivity secondary to prominent hardware or a sensitive scar?

Ms. Falla: We put them on a desensitization program as soon as their wound is healed. Tendon gliding with splint on as well as isolated ROM of non-involved digits is also very important in the early post-op therapy regimen.

Dr. Barbieri: In DIP fusion, I’ve had a few patients complain of hypersensitivity where a screw has been inserted retrograde and is buried in the distal phalanx. How do you try and help the patient get over that problem?

Ms. Falla: The desensitization hierarchy program seems to work best. We usually start them on very soft textures (cotton ball), and progress them to more rough textures (uncooked rice, plastic pellets). We establish a hypersensitivity baseline, and then set weekly goals for the patient.

Dr. Barbieri: Do you find this is something that becomes less sensitive with time and with the proper therapy? Or does it necessitate actually taking out the hardware?

Ms. Falla: Usually, it is your heavy laborers that are more sensitive due to the increased amounts of gripping and pinching. Often, they continue to have hypersensitivity. In that case, we begin adapting their work tools, teaching adaptive methods, and add gel padded tip/finger protectors.

Dr. Barbieri: Dr. Neumeister, you treat people who have traumatic injury to their PIP joint and require an arthrodesis by using a plate. What plate do you typically use, and do you often use bone grafts?

Dr. Neumeister: The plates that I have used are low profile, a 1.5 mm.

Dr. Barbieri: Does anyone ever use external fixation to achieve fusion?

Dr. Neumeister: I’ve used external fixators when I have had to use large segments of cortical cancellous bone graft because of loss of bone stock. I will use this technique in a staged procedure to maintain the length in acute trauma and then came back later, put the bone graft in there and leave the external fixator in place.

Dr. Barbieri: I found I have used external fixation in a few rare instances where the soft tissue injury will not safely permit plate application.

Dr. Barbieri: Dr. Neumeister do you have any tricks for putting on an external fixator?

Dr. Neumeister: I’ll use two k-wires on either side of the fracture or defect and then actually take methyl methacrylate and mold it into whatever shape that I want.

Dr. Barbieri: After I put in my four K wires, I’ll pierce the K wires with suction tubing and actually inject the cement through the suction tubing.

Dr. Neumeister: We’ve done a similar thing with an ET tube.

Dr. Barbieri: Dr. Slater, could you comment about the time to fusion, typically with a PIP joint vs. a DIP joint?

Dr. Slater: I think the time to fusion is actually the same. I would add that with a PIP joint, because there is more digit distally, there may be additional torque on the arthrodesis site. So it’s important to buddy tape the involved digit with the arthrodesis to the adjacent digit so that there’s less propensity for torque.

Dr. Barbieri: Ms. Falla is that your experience? Do you normally buddy tape it to the adjacent digit?

Ms. Falla: We have used buddy tape, as it gives them extra stability and they typically do better with regaining their ROM.

Dr. Barbieri: Dr. Capo, do you believe fusion in the thumb IP and MP joints is different than in the fingers?

Dr. Capo: I think it is. With the thumb, you really have to look at the whole ray of the thumb, and see what the state of the CMC joint is, as well as the adjacent digits. An isolated fusion in the IP or MP joint alone is fine. But combined together; fusion of both the IP and MP will put a lot of stress on your CMC joint. You have to decide what the CMC joint is going to do and decide whether or not an MP joint arthroplasty might be better.

Dr. Barbieri: Dr. Slater, do you agree with Dr. Capo’s statement that you would never fuse the IP and MP joint together?

Dr. Slater: Never say never, but as a general principal it would be prudent to explain to the patient that...
leaving one of those joints might provide them a more useful and functional thumb with less stress on the more proximal CMC joint. Alternatively, an arthroplasty of some type for the MP joint might be considered more seriously in that setting because there isn’t anything available for the IP joint other than arthrodesis.

**Dr. Neumeister:** Dr. Barbieri, I have fused the IP and the MP together and actually done an LRTI reconstruction of the CMC joint in someone who had really no motion but a lot of pain of the MP joint and instability and deformity of the IP joint. This was to maintain a stable distal post with some proximal motion.

**Dr. Barbieri:** Did these patients complain about their functional results?

**Dr. Neumeister:** Not the functional result.

**Dr. Barbieri:** Dr. Slater, do you still find screw fixation useful in the IP joint, especially with the wider diameter of the bone? Or do you find that in some circumstances that it’s difficult unless you select the perfect diameter screw to really gain a good bite?

**Dr. Slater:** The most typical scenario where you’re actually doing an IP joint arthrodesis in the thumb is in a case of rheumatoid arthritis, and therefore the fusion is often combined with other procedures. Then K wire fixation is a great option because rheumatoid bone is soft enough and you just need some-

**Dr. Barbieri:** Have you encountered a situation where once you put in the screw there’s still a little bit of toggle due to the wider diameter of bone in the thumb? In this situation would you add a K wire or change to a bigger screw or add a second screw?

**Dr. Slater:** I don’t think there’s enough room to add a second screw. I would remove the screw and use K wire fixation. But some of the newer headless screws are large enough that it’s difficult to imagine that you wouldn’t actually have solid fixation.

**Dr. Barbieri:** I believe fusion in the thumb requires a little more pre-operative planning since the size and character of the phalanges in the thumb seem to differ greatly among individuals. I strongly believe that anyone who does small joint arthrodesis should be comfortable with all the methods of fusing small joints. The specific technique utilized often needs to be tailored to the characteristics of the bone and the quality of the soft tissue.

How about the thumb MP joint, Dr. Capo? Do you treat that similar to the PIP joint of the fingers? Do you use a screw? Or do you use a tension band type device or plates?

**Dr. Capo:** If I’m going to fuse the MP joint, I think a tension band wire construct is my procedure of choice. What happens often, if we’re operating on the thumb and it’s a rheumatoid patient, is you might be doing several other procedures on the hand. In this situation, I think cross K wires are adequate if you’re trying to finish your procedure under one tourniquet time. But my standard would be tension band wiring with K wires and a dorsal wire.

**Dr. Barbieri:** Dr. Neumeister, you mentioned earlier, thumb CMC arthroplasty. When do you consider an arthroplasty vs. an arthrodesis of the thumb CMC joint?

**Dr. Neumeister:** Most of the arthritis that I see of the CMC joint of the thumb is in the elderly population. Most of them are woman actually and I’ll end up doing arthroplasties more often than not. The heavy laborer has traditionally been a person who’s a candidate for arthrodesis because of the stress of that particular joint, and I think that’s a valid indication. I think in the literature, it’s been stated that a poor candidate for arthrodesis is one who has an insensate ray or hand. I’m not sure that’s really the case. They fear that it may act like a Charcot joint, but I think if it’s unstable, yet insensate it may be of benefit and they don’t go on to further degeneration.

**Dr. Barbieri:** In my own experience I have fused many joints that were either replantations or traumatic injuries where the fingers were initially insensate and I haven’t run into the problem of a Charcot joint as of this time. How about you, Dr. Slater? What are your indications for fusing this thumb CMC joint?

**Dr. Slater:** Indications for fusion of that joint are pretty narrow, and are generally limited to a younger patient who has high demands on the hands because he or she is a manual laborer. The indications are pretty narrow because for one thing, patients don’t like being unable to flatten the hand completely as we were talking about earlier. And even with somebody that is active with sports or other activities, an arthroplasty is usually the better option.

**Dr. Barbieri:** What’s your fixation method of choice when fusing the thumb CMC?

**Dr. Slater:** In most cases, a small plate and screw fixation works best because it allows solid fixation. In some cases, one can use a headless screw. But rotational control can be
a problem and usually temporary secondary K wire fixation is used to prevent rotation around the screw.

**Dr. Barbieri:** Ms. Falla how would you protect the thumb CMC fusion?

**Ms. Falla:** We fabricate a thumb spica splint allowing IP movement. There’s not a lot of therapy involved in the initial phases after fusion. We teach them an extensive home program including scar massage, edema control, ROM of non-involved joints and desensitization. Further treatment is delayed until a good union occurs.

**Dr. Barbieri:** How would you treat a patient who has had a fused thumb CMC joint and then presents with arthritis either at the STT joint or the MP joint of the thumb?

**Dr. Slater:** In the STT joint, I took down the fusion and did a CMC arthroplasty, which solved both problems by removing the trapezium and combining that with a ligament reconstruction tendon interposition (LRTI) arthroplasty.

**Dr. Barbieri:** Did you find that the patient regained use of the thumb or did the previous period of inactivity really inhibit tendon function and glide?

**Dr. Slater:** They got rid of their pain and that was the primary objective. In terms of the motion of the thumb, it wasn’t much different than before but their pain was gone.

**Dr. Neumeister:** Dr. Barbieri, I would also take it down and do the LRTI to address the scapho-trapezoid joint. I’ve been happy with just taking a ronjour and removing the articular surface between the scaphoid and the trapezoid joint then interposing a small amount of tendon into that gap. That alleviates that area of arthritis.

Dr. Barbieri: Do you immobilize them for any period of time, or do you use K wires to hold the joint in place?

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**CPT Coding for Small Joint Arthrodesis**

Stiles T. Jewett, Jr., MD, FACS

CPT Coding for small joint arthrodesis of the hand is really quite straightforward. One simply needs to answer the questions: which digit(s), where (CMC, MP or IP), how (with or without bone graft) and how many? A total of eleven codes describe all of the potential procedures for small joint arthrodesis in the hand. In addition, all the codes include the use of fixation if employed and, where applicable, the obtaining of a bone graft. The only situation in which more than one code is necessary is in the case of multiple digits where simple add-on codes are used.

Codes for the **thumb** are:

1. **26820** – Fusion in opposition, with autogenous graft. This code includes obtaining the graft.
2. **26841** – Arthrodesis of the carpometacarpal joint, with or without internal fixation. If a graft is used then **26842** applies. This (and all graft codes) includes obtaining the graft. Do not code separately as this would constitute unbundling.

For the **digits other than the thumb**, arthrodesis at the carpometacarpal level is coded **26843** without bone graft and **26844** with graft. For the **metacarpophalangeal** joint use **26850** without and **26852** with bone graft.

**Interphalangeal** joint arthrodesis is coded **26860** without bone graft. If **more than one** joint is fused, the add-on code **26861** is used for each additional joint. If a bone graft is utilized **26862** applies with **26863** used for each additional joint done employing a bone graft.

**Solution:**

26280 Fusion in opposition, thumb, with autogenous graft (includes obtaining graft)

26851–51 Arthrodesis, metacarpophalangeal joint, with or without internal fixation

26851–51 “ “

Note the use of the –51 modifier (multiple procedures) as the add-on codes apply only to interphalangeal joint procedures. The ICD-9-CM codes used will depend on the underlying diagnosis.

Good luck and good coding!
Dr. Neumeister: I don’t use K wires at all, but I do immobilize them in a thumb spica for six weeks. And then I get them going with passive and active range of motion therapy.

Dr. Capo: I think that scapho-trapezoid joint is very important to look at, both after fusion and if you’re going to do an arthroplasty and remove the trapezium. If that joint is missed, that can cause persistent pain. I address it the same way and just do a small resection and interpose some tissue in there because that can be easily missed on X-ray and cause significant problems afterwards.

Dr. Neumeister: Have you ever tried to fuse that joint, the ST joint, instead of the interposition?

Dr. Capo: I have not tried to fuse it alone. I’ve done it obviously, in an STT fusion. But I haven’t had much problem with just resecting it.

Dr. Neumeister: Yes, neither have I. I think it works well.

Dr. Capo: Yes, I agree.

Dr. Barbieri: Changing gears slightly once again, I would like Dr. Slater to comment on how fusion in a child would differ from fusion in an adult.

Dr. Slater: The main difference in the child is that the goal is to preserve the epiphysis and the physeal plate, so it’s more of a chondrodesis. One must be very delicate and deliberate in the excision of the cartilaginous surfaces on either side of the joint without damaging the physeal plate, so it’s more of a chondrodesis. One must be very delicate and deliberate in the excision of the cartilaginous surfaces on either side of the joint without damaging the physeal plate.

Dr. Barbieri: Are your fixation techniques similar?

Dr. Slater: I’m more apt to use K wire fixation rather than leaving an intramedullary device or using plate fixation, which will be in the patient for the rest of his or her life. So K wire fixation usually is strong enough and then can be removed...
after fusion is accomplished so the metal need not stay in.

Dr. Barbieri: Dr. Neumeister?

Dr. Neumeister: I would agree. I think it’s important to preserve that ossification center. K wires would be the treatment of choice.

Dr. Barbieri: On a final note, Ms. Falla, could you comment on how you protect these children from breaking down the fusion after it’s been surgically stabilized?

Ms. Falla: You splint them and you strap them and you strap them! It is quite difficult with kids, but we do continue to use thermoplastic splints if possible. One trick we use is to wrap colored co-ban around the splint (on their arm). This keeps them from removing the splint so easily, as with straps. If all else fails, we resort to a long arm cast.

Dr. Barbieri: How about you, Dr. Capo, anything else to add?

Dr. Capo: Immobilization in children with any injury—basically, they get a long arm cast from me. It’s amazing how the little Houdini’s can squirm out of almost anything. Yes, so for a finger injury, children are put into a long arm cast.

Dr. Barbieri: All right. Well I appreciate everyone’s participation on this panel. Thanks once again for donating your time and expertise.
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