

# The Reading Room



## Note from Our Chair



J. Mark McKinney, MD  
Radiology Chair

It's that time of year again! We are glad to introduce our new residents and say a fond farewell to those who have recently left for fellowship training and jobs. It is a renewing cycle and one that we expect and enjoy at the region's academic medical center. Our faculty strive to impart the art and science of Radiology to all of our trainees, but it is a known fact that the trainees give all of us so much more in return. It is the joy of education and one that benefits both the student and the teacher. Please peruse the departing and the new faces and know how much we enjoy the process of education.

In this issue we also highlight two "P"s, PACS and Physics. PACS is integral to our academic mission at UT Medical Center. Charlie Owens and David Gridley are key to the process of maintaining a robust and sturdy PACS system with an uptime of >99%. We have recently added a new component to our PACS that improves our ability to educate and perform research. Wayne Thompson and Alex Pasciak are our physicists. Their contributions are diverse involving education, research, and clinical service.

I also want to welcome new faculty member and 2008 UTMC Radiology Residency Alumnus, Dr. Dana B. Fathy, who will work closely with our residents in the Emergency Department.

Enjoy *The Reading Room!*  
J. Mark McKinney, MD

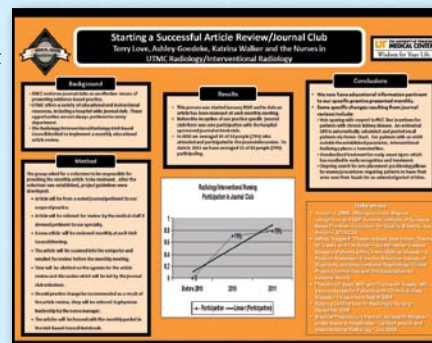
## IR Nurses Win! Going to Vegas.

Last May, our Interventional Radiology Nurses won First Place by the UTMC Nursing Research Council during the "Nurse's Week" poster competition with an abstract titled, "Starting a Successful Journal/Article Review Club." Now, their abstract has also been accepted for presentation in October at the Association for Radiologic & Imaging Nursing (ARIN) 5th Annual Fall Symposium in Las Vegas, NV.

Asking our IR Nurse Manager, Ms. Theresa "Terry" Love, RN how this success came about, Ms. Love describes how their journal club was created as a result of UTMC's recent pursuit of the highest "Magnet" certification by the American Nurses Credentialing Center (ANCC). The ANCC's Magnet status requires various quality metrics to be met and maintained, nursing policies and processes to be evidence-based, and for nursing to strive for professional development and growth. There are only 6.6 percent of hospitals nationwide with this status and so far, only two in Tennessee, being Johnson City and Vanderbilt Medical Centers.

## Department News

Ms. Love tells the story: "From Magnet grew our Unit Council including all of the nurses that work in Radiology and Interventional Radiology. The nurses were passionate about creating some kind of pertinent education for our specialty. This was the birth of our article review. Each month, one nurse finds an article that meets our established criteria and e-mails it out to everybody. We allot time on our agenda for the article review and discussion. If we feel there is a practice change that we need to make, the article is referred to our medical leadership for input. We have made some practice changes that we feel have improved our patient outcomes."



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## Special News

### Congrats to Our 2011 Graduates!

Radiology proudly congratulates our 2011 residency graduates for all of their hard work. Below, we note their medical school and immediate plans, while wishing them every success in their future careers. Please see more pictures of our Graduation Banquet and graduates on the back page of the newsletter.

The American Board of Radiology Oral Board Examination was given May 22-25 in Louisville, Kentucky.

#### Cassy Cook, MD

Medical School:  
University of Texas Medical School at San Antonio  
Fellowship:  
Neuroradiology at Baylor in Houston, TX

#### Jason Hill, MD

Medical School:  
University of Tennessee College of Medicine  
Fellowship:  
Neuroradiology at Vanderbilt Medical Center, Nashville, TN

#### Monty Smith, MD

Medical School:  
East Tennessee State University Quillen-Dishner COM  
Fellowship:  
Neuroradiology at UAB Hospital, Birmingham, AL



2011 Residency Graduates at graduation banquet [L-R]: Monty Smith, Cassy Cook, Jason Hill, and Nick Waddell. Robert Thurman is pictured below.

#### Nicholas Waddell, MD

Medical School:  
Indiana University School of Medicine  
Private Practice:  
MED Regional Medical Center, Memphis, TN

#### Robert Thurman, MD

Medical School:  
University of Tennessee COM  
Fellowship:  
Abdominal Imaging at UAB Hospital, Birmingham, AL



Robert Thurman with Research Day Award (More on Pages 3-4)

### 2011 Graduation Banquet Awards



RSNA Research Award:  
Jake Pirkle, MD, PharmD  
This award recognizes a resident who has played an active role in radiology research in the past year.



Graduating Residents' Faculty Teaching Award:  
James Boyd, MD



The Gould Award:  
Jason Hill, MD  
This award recognizes the upper year resident that best demonstrated dedication to the ideals of clinical radiology as exemplified by Howard R. Gould, MD.



Graduating Residents' Faculty Service Award:  
J. Mark McKinney, MD

## Welcome 2011 Rad Residents!

We are excited to welcome and introduce our first-year class. To get to know them better, our Residency Coordinator, Debbie Jarvis, asked them these questions:

1. What do you like to do in your free time?
2. Who has been the biggest inspiration in your life and why?
3. What one place would you like to visit?
4. What's the best thing that's ever happened to you?
5. What else would you like us to know about you?

### Joanna Blankner, MD

#### University of Tennessee College of Medicine

1. [Free Time?] "Top on my list is spending time with friends and eating good food. If you know of any good restaurants, let me know! Then there's cooking, hiking, watching movies and/or crime drama, spending time with family, long walks on the beach..."

2. [Inspired You?] "There's no one person. As an adult my grandmother, who was trained as a nurse during the great depression; my department chair at Kennedy Krieger who had gone to medical school at a time when few women went and her family was skeptical."

3. [Where?] "Wimbledon. I want to eat strawberries and cream during the fortnight. I want to sit on Center Court for the finals."

4. [Best Thing?] "Coming back to Tennessee for medical school. I got scholarship money for school, I'm close to family, I made fabulous friends, and met my boyfriend."

5. [What Else?] "I can't think of anything else right now."

### Austin Bourgeois, MD

#### University of Alabama School of Medicine

1. [Free Time?] "I play a lot of golf, run, kayak, hike, attend a small-group at our church, volunteer, work on the house, make homemade beer, cook, travel, and fish."

2. [Inspired You?] "I would have to say my brother. He was a really talented athlete when he got injured. He taught me to take adversity in stride and keep working no matter your circumstances."

3. [Where?] "I have a hard time saying just one. Cappadocia, Nairobi, the Galapagos, and Macchu Picchu are on the short list."

4. [Best Thing?] "Going to Spain for a study abroad... I met my wife in Madrid (She's from Birmingham, AL)."

5. [What Else?] "I have been married for 3 years, don't have any kids, grew up in Nashville, and am very excited to be at UT!"

### Scott Embry, MD

#### East Tennessee State University Quillen-Dishner COM

1. [Free Time?] "I like traveling as often as I can, and doing anything outdoors. I also love watching and playing all types of sports."

2. [Inspired You?] "My mother, for overcoming a lot of obstacles in her life to be in the place that she is now."

3. [Where?] "Cambodia"

4. [Best Thing?] "I married my wife."

5. [What Else?] "We also enjoy renovating old houses. We have no kids, but a dog that is treated like one."

### Katherine Frederick-Dyer, MD

#### University of Tennessee College of Medicine

1. [Free Time?] "I'm a casual runner. I've been training up for

## Radiology Residency Program



First-Years [L-R]: Joanna Blankner, Austin Bourgeois, Scott Embry, Katherine Frederick, Yitong Fu, and Melissa Neveu

the Man Run recently. I SCUBA dive occasionally. I also love music. I play the piano and drums whenever I get the chance."

2. [Inspired You?] "...so far as the medical field is concerned it is my aunt. She is a gastroenterologist and initially encouraged me to pursue medicine. In spite of her busy schedule she still manages to care for patients and live a pretty balanced life."

3. [Where?] "I would like to go to the United Kingdom someday, and not just to see the new princess. I would love to see Stratford on Avon, the Globe Theatre, Buckingham Palace, and tour around London in a double decker bus!"

4. [Best Thing?] Matching in this residency :) I suppose that and getting married are the best things that have happened to me."

5. [What Else?] "I have a cat named Tilly and a hedgehog named Chet, both of which I am quite fond."



Chet the Hedgehog.

### Yitong Fu, MD

#### Shandong Medical University, China

1. [Free Time?] "I enjoy hiking, jogging, playing pingpong, roadtrips, watching Chinese TV series online."

2. [Inspired You?] "My older brother. He advised me to go to medical school when I was 16. My greatest goal is to bring him to the US for a visit."

3. [Where?] "I would like to take a cruise to Europe with my family soon, and to know more about European history and culture."

4. [Best Thing?] "Meeting my wife, marrying her for 20 years, and having two smart children."

5. [What Else?] "Interesting fact about me: I was in Tiananmen Square on June 4th, 1989 (during the freedom protest). I declared, 'I am not the hero or the Tank Man in front of the tank.'"

### Melissa Neveu, MD

#### Loyola University Chicago Stritch School of Medicine

1. [Free Time?] "Riding horses, reading, taking my daughter to the park"

2. [Inspired You?] "My grandmother was a wonderful lady who helped raise me. She spent the majority of her time volunteering for children and the homeless through her church. She always supported me in all of my endeavors."

3. [Where?] "Lewa Downs (wild animal reserve) in Africa"

4. [Best Thing?] "My husband Charles and daughter Elizabeth"

5. [What Else?] "I love cupcakes and Diet Coke!"

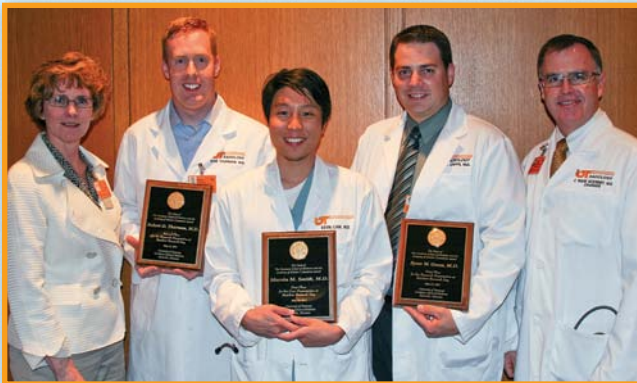
## Research and Academics 2011

### Residents Attend Conferences and Win Presentations Awards at the Graduate School of Medicine's 2011 Resident's Research Day

UTMC Radiology Residents have had a very busy and successful 2011 academic year. Besides attending and presenting research abstracts at multiple national conferences, our residents gave five presentations and won three awards at the Graduate School of Medicine's 2011 Research Day on May 25<sup>th</sup>. All of the talks were judged by a panel of five judges that included MDs and PhDs. While a first author was named on the awards, notes are given below to show what a team effort is

required, including the names of all of the contributors and of the two presentations given by first-year residents.

After being elected as co-chiefs last spring, residents Mandy Ingram, MD, and Jake Pirkle, MD, attended the American Alliance of Academic Chief Residents in Radiology April 12-15, in Boston, Massachusetts. In addition, Dr. Ingram then attended the Society of Breast Imaging Biennial Meeting in San Antonio, Texas, May 17-20.



[L-R]: Kathy Hudson, MD, Awardees Rob Thurman, MD, Kevin Liaw, MD, Ryan Owen, MD, & J. Mark McKinney, MD



[L-R]: GSM Research Day Director Bill Metheny, PhD, Awardee Monty Smith, MD, Kathy Hudson, MD and GSM Dean Jim Neutens, PhD

### First Place Research Presentation

Author: Ryan W. Owen, MD [at right]  
Contributor: Alex Pasciak, PhD

"A Novel Modification of the Jaszczak Phantom for Evaluating Scanner Performance and Dosimetry in Y90 Microsphere PET/CT Imaging"

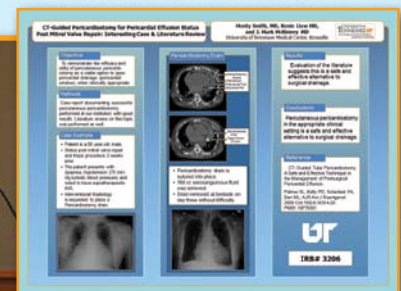
Accepted to: RSNA 2011, 97th Annual Meeting, Chicago, IL Nov. 27 - Dec. 2



### First Place Case Presentation

Author: M. Monty Smith, MD  
Presented by: Kevin Liaw, MD [at right]  
Contributors:  
Kevin Liaw, MD & J. Mark McKinney, MD

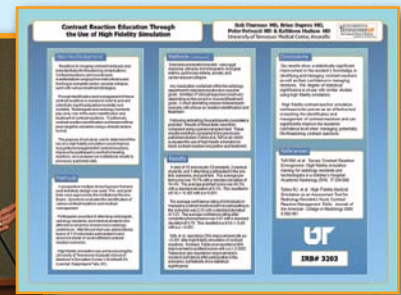
"CT-Guided Pericardiostomy for Pericardial Effusion Status Post Mitral Valve Repair: Interesting Case and Literature Review"



## Second Place Research Presentation

Author: Robert Thurman, MD [at right]  
 Contributors: Brian Dupree, MD,  
 Peter Petruzzi, MD, & Kathleen Hudson, MD

"Contrast Reaction Education Through the  
 Use of High Fidelity Simulation"



## More 2011 Research Day Presentations and Conferences Attended

Author: Delaney Santoro, MD  
 Presented by Eric Johnson, MD [at right]  
 Contributors: Jason Hill, MD, Rob Thurman, MD,  
 Peter Petruzzi, MD, Peter Kvamme, MD,  
 and Geoffrey Laing, MD

"Malpositioned Central Lines: A Pictorial Review"

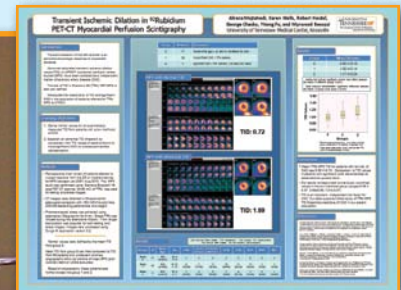
**Association of University Radiologists 59th  
 Annual Meeting, Boston, MA April 12-15**



Author: Alireza Mojtahedi, MD [at right]  
 Contributors: Karen Wells, MD, R. Eric Heidel, MS,  
 Yitong Fu, MD, Myrwood Besozzi, MD,  
 and George Chacko, MD

"Transient Ischemic Dilation Ratio in <sup>82</sup>Rubidium  
 PET-CT Myocardial Perfusion Scintigraphy"

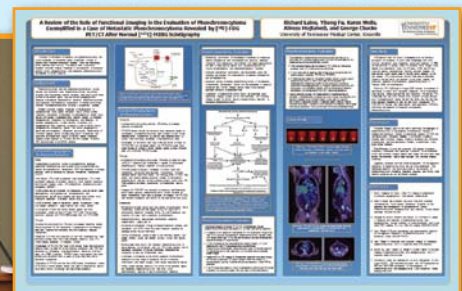
**The Society of Nuclear Medicine (SNM)  
 Annual Meeting 2011, San Antonio, TX June 4-8**



Dr. Mojtahedi also showed a 2nd Poster at 2011 SNM: "Fat Necrosis Might Mimic Metastasis on <sup>18</sup>F-FDG PET/CT", Co-authors: George Chacko, MD, Yitong Fu, MD, Richard Laine, MD, and Karen Wells, MD

Author: Richard Laine, MD [at right]  
 Contributors: Karen Wells, MD, R. Eric Heidel, MS,  
 Joshua Schaeferkoetter, Misty Long, RT,  
 Wahid Hanna, MD, and Karl Hubner, MD

"Early Prediction of Response to Chemotherapy  
 in Non-Small Cell Lung Cancer Patients  
 Using <sup>18</sup>F-FDG PET/CT"



Dr. Laine's Poster at SNM: "A Review of the Role of Functional Imaging in the Evaluation of Pheochromocytoma Exemplified in a Case of Metastatic Pheochromocytoma Revealed by <sup>18</sup>FDG PET/CT After Normal <sup>123</sup>I-MIBG Scintigraphy", Co-authors: Yitong Fu, MD, Karen Wells, MD, Alireza Mojtahedi, MD, and George Chacko, MD

Karen Wells, MD, 2010 Nuclear Medicine graduate and a Radiology Attending also presented at SNM 2011: "Radioimmunoimaging of Cardiac Amyloid Deposits in AL Amyloidosis Patients"  
 Co-authors: Jonathan Wall, PhD, Stephen Kennel, PhD, Bjoern Jakoby, Alan Solomon, MD

## Radiology Section Spotlight

### A Peek at PACS!

UTMC Radiology has been going digital for more than a decade now. We take a quick look at our core PACS team to get an update and give some insight into our successes in the implementation of this vital component in modern medicine.

PACS administrators and institutions must confront a complex mix of practical needs and legal requirements in managing the ever-increasing volume of images and reports, between short-term use, and long-term storage and retrieval. On May 31<sup>st</sup>, our PACS administrator, Charles Owens was invited to speak at a General Electric® PACS conference in Washington, DC about his experiences using GE's new Image Lifecycle Management\* software, or "ILM" in meeting these challenges.

In his talk, Mr. Owens first discussed UTMC's creation of a comprehensive, institutional "retention policy" that accounts for federal and state regulations, along with recommendations by accrediting agencies. Both JCAHO and ACR accreditation requires this policy to be in place. Charlie then summarized UTMC's process in making a workable policy with an analysis of the "Triangulation of Different Needs" between Radiology and Legal Compliance, and thus between the practical costs of managing lots of data versus the conservative mitigation of risk in pending litigation and future liabilities.

The ILM virtual tool is used to manage PACS data by creation of "rules" to determine how specific data fits under a retention policy and where it goes after, either being moved to storage or deleted. Different types of images can have vastly different risk needs. At UTMC, "outside" exams and test images are not stored long-term, while UTMC mammography and pediatric images must be stored for 20 and 25 years respectively. Mr. Owens finished with examples of our ILM console used to "run the rules" that include a total of 127 rule combinations for managing all of the ILM actions. Charlie's real-world experiences were very well-received.

PACS was brought to UTMC in 1999 under former Radiology chairman, R. Kent Hutson, MD. Working with PACS since the early 2000's, Charlie was an MR Radiographer prior to this, here at UTMC. Thus Mr. Owens brings clinical expertise that daily informs his



**Our PACS Team: Charlie Owens and David Gridley**

duty as the public liaison between various vendors, our hospital administrators, and the practical training of our clinical staff, required to make PACS work daily.

But, Charlie is quick to credit computer Systems Administrator David Gridley, the "technical expertise" of our team, for our success in PACS. Mr. Gridley builds all the new workstations, updates software, and repairs broken hardware, like Dictaphones\*. Charlie notes, "David is key to the maintenance and deployment of new hardware." Besides this and keeping an eye on our network and more servers, David also does daily PACS database clean-up chores of bad and unspecified exam orders. Charlie says, "I couldn't do my job without him."

To give some idea of how PACS has grown at UTMC, today with our latest upgrade, UTMC Radiology's PACS has over 50TB (terabytes!) of storage capacity. We expect 250,000 reports and images per year, not counting the outside images imported daily. Charlie notes that, "even if overall exam numbers decrease, we will still have increasing data volume due to thinner slice capabilities of newer scanners." UTMC now counts over 50 high-resolution work stations throughout the hospital, in the units and OR suites. Every physician sending patients to UT can now view images on their PCs and other devices via secure connections to PACSWeb. You know you've 'arrived' in routine clinical practice when scheduled PACS downtimes for upgrades are now hospital-wide, as well as referring-facility-wide announcements.

## Faculty Profiles

## The New Physics of Radiology Residency: A Discussion with Wayne Thompson and Alex Pasciak, PhD

As our residents begin their 2011-2012 academic year, *The Reading Room* focuses its “field of view” on changes to their medical physics training. Last year, UTMC Radiology welcomed Alex Pasciak, PhD adding a further resource and dimension to our residency program and to the well-proven record in education by our Wayne Thompson.

A native of Philadelphia, Dr. Pasciak attended the University of Washington in Seattle before earning Masters degree in Health Physics and PhD a in Nuclear Engineering at Texas A&M in College Station, TX. Thus, Alex brings experience in medical physics practice and research. He will be completing his ABR Board certification next year.



Alex Pasciak, PhD

A native of New Hampshire, Wayne Thompson continues his 22 years here at UTMC Radiology, having already trained 134 residents at UTMC. Wayne is certified by the America Board of Radiology, the American Board of Science in Nuclear Medicine, and the American Board of Medical Physics (admitting he’s a glutton for punishment). His CV counts 15 journal articles, 20 professional meeting abstracts, 27 invited lectures, and 2 books. Amazingly, Wayne taught at Baylor College of Medicine in Houston for 15 years and the University of Vermont Medical School for 4 years before coming to Knoxville!



Wayne Thompson

*The Reading Room* [RR] asks Wayne [WT] and Alex [AP] to tell us about how new ABR requirements will effect their curriculum and resident research.

**RR:** “How will physics change in the coming months and what challenges will you face?”

**AP:** “The ABR has recently made drastic changes to its testing structure and the physics and clinical exams will now be combined. This will probably make the ABR certification process more challenging since the residents will no longer be able to focus on just physics or just clinical for a particular exam; they will have to know everything. The physics course taught by Wayne and I has been totally redesigned this year in response to changes. Radiology residents will now receive at least one semester of physics didactic lecture per

year, every year, until they take their exam in year 4. In each successive year, the physics lecture topics will become more and more advanced, mirroring their increase in clinical knowledge. Didactic lectures will be augmented by RSNA online self-study modules which must be completed and turned in during off-semester.”

**WT:** “(The challenge will be) having enough lecture time to present all of the basics physics for each modality while including sufficient clinical examples to ensure a strong connection.”

**RR:** “How are you working with residents in preparing research projects?”

**AP:** “Depending on their background and the medical school attended, most incoming radiology residents have little or no research experience. I have been working with several residents on projects this year, acting as a guide through all aspects from the literature search to submission of abstracts and journal articles. While research will never be a big part of the careers of many of our residents, the skills they learn from working on a research project during their residency will aid them in their clinical development and help them become well-rounded radiologists.”

As noted earlier (pgs 4-5), Dr. Pasciak guided a research project with resident Dr. Ryan Owen that resulted in a first place presentation award at our GSM’s 2011 Resident Research Day. Alex’s additional work with resident Dr. Ted Chang has gained acceptance<sup>2</sup> (along with Dr. Owen’s abstract<sup>1</sup>) for poster presentation at the upcoming 97<sup>th</sup> RSNA 2011 conference in Chicago. Meanwhile, Dr. Pasciak just presented two more posters<sup>3,4</sup> of his own in August at the American Association of Physics in Medicine (AAPM) Conference in Vancouver, BC. Dr. Pasciak is proving to be a great compliment to our training program as it meets evolving challenges and demands.

### Poster Abstracts:

1. R. Owen and A.S. Pasciak and A. M. Balias; Post-Infusion Coincidence Imaging of Y90 Microsphere Therapy Using PET/CT: A Quantitative Patient and Phantom Study. Accepted RSNA 2011, Chicago, IL, Nov.27-Dec.3.
2. T. Chang, A.S. Pasciak and J.M. McKinney; Ferromagnetic Detectors: The Challenges Associated with Providing Improved Patient Safety in MRI. Accepted RSNA 2011, Chicago, IL, Nov.27-Dec.3.
3. A.S. Pasciak, and A.K. Jones\*; Application Specific Mathematical Optimization of Lead-Free Apron Composition. 2011 Amer. Assoc. Phys. Med; Abstract published in--Med. Phys., vol. 38(6), 3408, 2011.
4. A.S. Pasciak, and R. Owen; Evaluation of Quantitative Direct PET/CT Imaging of Y-90 Microspheres Using the Jaszczak Phantom. 2011 Amer. Assoc. Phys. Med; Abstract published in--Med. Phys., vol. 38(6), 3436, 2011.

\*A.K. Jones, University of Texas MD Anderson Cancer Center.

## Recent Events

### More scenes from the 2011 Radiology Graduation Banquet

Here are some more scenes from our 2011 Radiology Residency Graduation Banquet. As with every year, it sure is hard to see them go. To the right and below are our graduates with their families and saying a few parting words. At bottom is a sampling of some of the regulars that we hope make you miss us.

Graduate Rob Thurman, who could not attend due to a long-scheduled family vacation, showed up anyway via video camera, becoming our first resident to ever teleconference to his graduation! The beach background was a nice touch. We wish all of them "All the Best!" in their future journeys and hope they'll visit us soon.



Rob Thurman is our first to teleconference to the banquet from his family vacation.

