

ISET DAILY NEWS

Sunday, January 15, 2012

Welcome to ISET 2012

Welcome to ISET 2012. Thank you for starting the year with us.

For more than two decades, ISET has served the educational needs of the interventional community. First with the pioneering of live case demonstrations and later with the addition of other dynamic learning components, the meeting has always focused on you, the attendee. Through trial results, debates, case reviews, first-hand clinical accounts, and posters and presentations based on peer-reviewed abstracts, ISET offers the perfect snapshot of what the year ahead will hold for all of us and prepares us for the future.

Likewise we welcome the attendees of the Symposium on Clinical Interventional Oncology (CIO), now

in its fourth year. As North America's fastest growing interventional oncology meeting, CIO follows in the tradition of ISET to bring you the latest in technology and information that will impact your practice.

As we present the 24th annual edition of ISET, we ask that you continue to play a role in moving the field forward by participating in the meeting in a variety of ways: through interactive polling, which gives you the chance to answer clinical questions posed during lectures and live cases; through Twitter (#ISET), which allows you to comment on any aspect of the meeting (interesting data from a talk, a new technique featured during a live case, surprising results from a polling question); and through the ISET Question of the Day, which will

be e-mailed daily to a number of attendees. Answers to that question, along with poll results and interesting tweets, will be published in the ISET newspaper.

As always, we value your feedback in the daily online evaluations (look for them in your inbox), which gives you a voice in what happens at the meeting next year.

We all look forward to seeing everyone – ISET and CIO attendees and exhibitors, in addition to our valued faculty – at tonight's Welcome Reception.

Barry T. Katzen, M.D.
James F. Benenati, M.D.
Alex Powell, M.D.
Shaun Samuels, M.D.
Ramon Quesada, M.D.
Constantino Peña, M.D.
Adam Geronemus, M.D.
Jane Kiah, R.N., M.S.
ISET Course Directors

CIO Sessions Tackle TACE and Drug-Eluting Alternatives

The Symposium on Clinical Interventional Oncology (CIO) began in 2009 as a unique educational approach to an increasingly important problem, said Barry Katzen, M.D., on Saturday, as he kicked off the fourth annual CIO, presented in collaboration with ISET.

To ensure CIO remains cutting edge, "we try something a little bit different each year," based on attendee requests, said CIO program director Shaun Samuels, M.D. This year, for instance, the CIO opening session on transcatheter arterial chemoembolization (TACE) came about because "I admitted to myself I was confused at something as simple as conventional TACE," he said.



Shaun Samuels, M.D.

"I hope I'm not the only one who feels that way. It seems that there's confusion in the ranks about how we're supposed to be doing TACE."

Samuels said other highlights during the two-day CIO include the Saturday morning focus session on drug-eluting embolics—or,

as Samuels referred to it, the "Wild West of drug-eluting embolics"—and the Sunday afternoon live demonstration "Setting Up the TACE Table: How Three Experts Do It," which will discuss everything from metal versus glass stopcocks to which type of catheter wire to use.

Another highlight is Samuels' Sunday afternoon session "Off the Grid: Stories From the MacGyver Files."

"You always hear stories out there about these crazy cases," he said. "Since a lot of what we do we make up as we go along, we decided to have discussions from people who have done crazy things."

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Jeff Geschwind, M.D., far right, addresses a poll response from the audience during the Tumor Board for CRC Mets presentation during the Symposium on Clinical Interventional Oncology Saturday. Other panelists included, left to right, Ziv J. Haskal, M.D., and Riccardo Lencioni, M.D.

Welcome Reception Tonight

ISET and CIO attendees, gather tonight with colleagues, faculty, course directors and exhibitors at the ISET Welcome Reception. Featuring food, drink and music in the lively ISET Exhibit Hall, the party promises an evening of relaxation and fun – a great foil to the intensive learning that has already taken place and will continue over the next several days.

Starting at 7:00 p.m., you can meet with exhibitor representatives who will man their booths, catch up with friends and

peers over a cocktail and enjoy hearty refreshment as you recharge following a day of great talks and more.

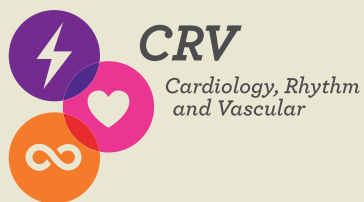
Attendees and exhibitors are asked to clearly display their badges for entrance into the reception. Guests may also attend so long as they enter with an attendee wearing a badge.

After the reception, the party moves into the General Session room where Boston Scientific co-founder John Abele will deliver a special lecture at 8:30. (See related story on page 3.)

The ISET Effect: Sunday

Today's highlights include:

- **Symposium on Noninvasive Vascular Diagnosis** begins at 8:00 a.m. in Fontaine Room. Live case scanning is scheduled for 11:40 a.m.
- **Advanced Interventions for Nurses and Technologists** begins at 8:00 a.m. in Splash Ballroom 9-10.
- **Symposium on Clinical Interventional Oncology**, day two, begins at 8:00 a.m. in the Glimmer Ballroom.
- **Exhibit Hall Welcome Reception** begins at 7:00 p.m. followed by a special lecture by Boston Scientific co-founder John Abele at 8:30 p.m. (See page 3.)
- And don't forget to set your alarm for tomorrow morning's **Industry Educational Sessions**. (See page 6.)



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rupture • Vessel occlusion • Vessel spasm. Additionally, the following complications may result from a balloon dilatation procedure within the biliary system: Cholangitis • Hemobilia • Pancreatitis • Duct injury, e.g. dissection, perforation, rupture • Duct occlusion • Duct spasm.

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Determination, ISET Connection Drive Search for the U.S.S. Grunion

Boston Scientific co-founder John Abele understands the power of knowledge. As the creator of one of the world's largest medical device companies, he has put scientific information to use to benefit mankind physically.

Knowledge can also heal the heart and ease the soul, something Abele found out firsthand when he and his brothers set out to discover the whereabouts of their father's sunken World War II submarine. The U.S.S. Grunion went down in 1942, leaving the three boys and their mother without the answers that might bring closure.

The search that Abele would undertake some 60-plus years later got a boost when he attended ISET in 2005 as a faculty member. That year the Sunday night special lecture that followed the ISET Welcome Reception was delivered by Robert Ballard, the oceanographer credited with locating the Titanic. A conversation between the two men served as the impetus for Abele's long-held desire to find the sub once directed by Cmdr. Man- nert L. Abele.

"I knew about Ballard, but the first time I met him was at ISET," Abele recalls. "Even though he wasn't available [to work on the Grunion project], listening to his story and talking to him afterward gave me the confidence that I could

do it. He visited us later and gave us more advice."

Ironically, Ballard's suggestions might have hampered efforts had Abele and his brothers not believed they were already on the right track.

"When we showed him the data we had about the location and the first sonar images, he thought it was unlikely that we had a good



John Abele

target," Abele remembers. Others likewise offered assessments that might have dampened the brothers' hopes of achieving their goal.

"We also discussed the project with senior scientists at the Woods

Hole Oceanographic Institution [the largest private such organization in the world]," Abele says. "We were told later that they thought the likelihood of our finding the Grunion was less than zero."

The big break in the mystery of the Grunion came when a Japanese historian found an account of the sub's last battle, a confrontation with a cargo ship. When the Japanese freighter's crew spotted two torpedoes bubbling toward them, they retaliated by firing a deck gun 84 times in the Grunion's direction. The vessel and its 70 crewmen were never heard from again.

"We felt that we were doing this project for a lot of people," Abele says today. "The most amazing part of the story was finding relatives for every single sailor on the Grunion, arranging ceremonies for them and stories in local papers. We even found relatives of officers on the Japanese ships my dad sank."

"The bigger goal was to recognize and honor some forgotten soldiers who died in order to protect the way of life we lead," Abele says. "This wasn't just a search for what happened to our dad."

In the end, the knowledge that came with finding the Grunion's final resting place—in the Bering Sea off the coast of the Aleutian Islands—must serve a greater purpose, Abele believes: "To recognize



The Grunion's original ship's bell, removed before war duty, was found in Mississippi in 2007.

all the millions of people whose lives were lost during that conflict. Fifty million people died as a result of World War II. Those who cannot remember the past are doomed to repeat it."

Hear Boston Scientific founder John Abele recount the international search he funded to locate the U.S.S. Grunion, the WWII submarine that went down under the command of his father, tonight at 8:30 immediately following the Welcome Reception.

Institute Physicians Team up to Navigate Expanded Indication for Carotid Stents

Carotid artery stenting (CAS) continued its rapid advance when the FDA recently approved an expanded, new indication based on 2010 results from the landmark NIH-sponsored CREST trial. The FDA confirmed its advisory panel's decision by approving carotid stenting for stroke prevention in both symptomatic and asymptomatic patients at standard surgical risk. As a result, a vast new pool of patients who formerly had no option to endarterectomy (CEA) are now eligible for CAS.

As a center of excellence for carotid therapy, Baptist Cardiac & Vascular Institute uses insights about patient selection factors gained from CREST and other studies to optimize and individualize patient selection between the two modalities. Each carotid patient at the Institute receives advanced imaging and full multispecialty team evaluation to identify and score all clinical and anatomic factors rel-

evant to the treatment decision.

"Where the Level I science now stands is that in symptomatic patients at all levels of surgical risk, carotid stenting and CEA are equally safe and efficacious," said James F. Benenati, M.D., medical director of the Institute's Noninvasive Vascular Laboratory and a leading interventional radiologist. "However, with asymptomatic patients—even in the presence of high-grade disease—the jury is still out on whether they should be treated or should instead receive best medical therapy.

"Unfortunately, CREST didn't look at that question," noted Benenati, who enrolled patients in CREST's interventional arm. However, he concluded, "for all risk-category asymptomatic patients, once a decision has been made to treat, the best medical evidence indicates that patients should be offered both CAS and CEA, with the final decision subject to individual patient selec-

tion factors."

The Institute's long record of proficiency in both stent and surgical modalities and its multidisciplinary team approach involving interventional radiologists, vascular surgeons and neurologists "means there's no incentive to do one procedure over the other," said leading Institute vascular surgeon Athanassios I. Tsoukas, M.D. "Over the years, our physicians have developed a unique ability to collaboratively navigate even the most subtle factors to optimize patient selection between stenting and surgery."

CREST and other studies have revealed elevated cardiac risks for CEA and a higher risk of mild procedural stroke for carotid stenting. Other factors favoring stenting over surgery for any individual patient are: radiation scarring or previous surgery or treatment for cancer in the neck, contralateral carotid occlusion and a high carotid bifurcation

that would require the surgeon to operate under the mandible.

"Our highly skilled interventionalists can handle a high bifurcation that would be a problem for a surgeon," confirmed Tsoukas, who also enrolled patients in the landmark CREST trial. On the other hand, he pointed out, "Arterial calcification that would give an interventionalist pause doesn't scare a surgeon."

"Advanced, noninvasive vascular imaging and unparalleled expertise at evaluating images—outgrowths of the Institute's world-renowned interventional programs—give physicians here a clear advantage at identifying and scoring relative risk factors for CEA vs. CAS," Benenati pointed out. Factors that weigh against stenting, he confirmed, are access vessel tortuosity and calcification, and difficult anatomy in the aortic arch.

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CIO

Continued from page 1

ISET is known for its live case demonstrations, but because CIO is held on the weekend, live cases are problematic, Samuels said. Consequently, the aim of CIO is to “distill the technical aspects of what we do into a non-live case format, but with a live case feel, by a navigation through cases.”

The Case for TACE

CIO's first session, TACE Town Hall, began with an intriguing problem statement: Triple Drug, RIP: What Now for Conventional TACE?

Moderator Timothy Clark, M.D., said usage of triple-drug TACE began as a result of a 1986 prospective study of 51 patients with hepatocellular carcinoma (HCC). Patients were given unilobar TACE using three drugs: 50 mg of cisplatin, 50 mg of adriamycin and 10 mg of mitomycin. The embolic agent was gel foam powder. The median survival time for study participants was approximately nine months.

Since then, there have been more than 1,000 English-language studies on TACE, Clark said. That research shows cisplatin prevents mitosis, adriamycin prevents the DNA double helix from resealing during replication, and mitomycin-C is a potent cross linker of DNA.

Conventional reasoning is that this particular drug cocktail is the best choice for TACE because the drugs attack cancer cells during different stages of the cycle. But the real rationale, Clark said, is based on the unpublished experience of an individual oncologist who found the drug treatment to be active and well tolerated in a few patients.

“And that is all the data there

is—that's led to 20 years of the use of this cocktail for chemoembolization,” he said.

But that may soon change because there are shortages of two of the drugs. Bristol Meyers Squibb stopped manufacturing cisplatin powder in December 2010, and now suggests carboplatin powder as a replacement because the chemical formula is very similar. Adriamycin is on back order.

So what happens now? The lack of drug availability is an opportunity to reassess TACE, Clark said. Triple-therapy TACE needs to be done with different agents, and better rationale and more methodical data is needed, he added.

The Rationale for Drug-Eluting Embolics

Alternatives to TACE include embolic drug-eluting beads (DEB), bland embolization and Y90. “There are lots of interesting discussions and debates, and a strong rationale for each and every one of these,” said presenter Riad Salem, M.D. “Thinking of how to apply these tools to individual patients will really personalize medicine.”

An audience poll taken during the TACE town hall showed that embolic drug-eluting beads are already a therapy of choice for many ISET attendees. Audience members ranked HCC therapies they used the most:

Drug-eluting embolics: 44 percent
TACE: 34 percent
Radioembolics: 18 percent
Bland embolics: 4 percent

Drug-eluting embolics are so popular that CIO devoted Saturday morning's focus session to them. William Stavropoulos, M.D., kicked off the session with an overview of the different types of drugs

available.

Drug-eluting embolics are an option because TACE isn't perfect, he said. TACE has significant post-embolization syndrome, the sustained response is only greater than three to six months in about a quarter of patients, and there are many technical inconsistencies that make it hard to compare results between institutions.

Embolic drug-eluting beads have the potential to improve on conventional TACE, Stavropoulos said. Although there is no FDA approval at this point, he said strategies are underway to achieve that.

Stavropoulos discussed various DEB alternatives, including:

- Microspheres loaded with chemotherapeutic drugs. Advantages include a calibrated size, improved pharmacokinetic profile, improved drug delivery to tumors and potential for standardization.

- Doxorubicin for HCC. Cardiotoxicity is not usually an issue with the doses used in chemotherapy, and the drug can be mixed with LC beads and QuadraSphere beads.

- Epirubicin for HCC. Has fewer side effects than doxorubicin.

- Irinotecan. Has a faster drug release than doxorubicin.

Tumor-Freezing Treatment Gives Ovarian Cancer Patients Extra Time

Study results to be presented today during the Symposium on Clinical Interventional Oncology

Killing tumors by freezing them can add precious time to the lives of women with ovarian cancer that has spread to other parts of the body. Minimally invasive cryoablation extends lives and is cost-effective, according to a study being presented today at the 4th annual Symposium on Clinical Interventional Oncology (CIO), which is presented in collaboration with ISET.

Once the cancer has metastasized beyond the ovaries, it usually is not curable, and surgery is often used to remove the tumors and extend life. Depending on the location of the tumors, however, surgery might not be an option, especially if the patient has previously undergone surgery to remove the cancer. The study shows cryoablation may be used to kill these tumors with extreme cold, resulting in significant survival time.

The study included 21 patients whose tumors in the abdomen, liver, lung and bone could not be removed surgically. Cryoablation was used to treat 48 tumors, killing 47 of them (98 percent). From the time of diagnosis of metastatic disease, average patient survival time was more than four years and seven months. That's significant because women whose tumors are not successfully removed surgically – which occurs in about 60 percent of cases, according to studies – typically survive from about seven months to 2

½ years. On average, more than three years had transpired from the time of diagnosis to the first cryoablation treatment, meaning these women had already passed their expected survival time, and yet cryoablation was able to extend their survival even further. Some patients had multiple cryoablation treatments and of 41 procedures, there were three major complications (7 percent). The complications included two deaths that were attributed to the cancer, not to the procedure.

The study also determined the treatment was extremely cost-effective, costing an average of \$26,806 per life year saved, well below the current standard of \$100,000.

“This study adds to the evidence that cryoablation is an effective option for patients who can't have surgery,” said study author Hyun J. Bang, M.D., a radiologist resident at Wayne State University/Detroit Medical Center. “This procedure is often overlooked, but based on the high survival rate, cost effectiveness, consistent local control and safety of the procedure, we should be taking a closer look at cryoablation as an option before these women enter the latter stages of their disease.”

In cryoablation, a small needle is placed through the skin into the tumor, which is located using imaging guidance. High pressure argon flows to the tip of the cryoprobe where it expands in an internal chamber, causing a powerful cooling effect on the outside of the probe. This allows for rapid ice formation, which freezes and kills tumor cells.



Govindarajan Narayanan, M.D., presents Challenging Cases Using Drug-eluting Embolics and Assessing the Response during CIO on Saturday.

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Tough on HCC,
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Tough on HCC

- Two independent studies reported median survival rates of 17.2 months in Child-Pugh A hepatocellular carcinoma (HCC) cirrhotic patients with various tumor characteristics (N=291, N=108)^{1,2}
- WHO and EASL response rates were 42% and 57%, respectively (N=273)¹
- 58% of TheraSphere patients were downstaged³

Easy on patients

- The majority of adverse events were mild to moderate in severity⁴ and were manageable or resolved over time²
- No ulcers or pulmonary toxicities were reported in two large independent studies (N=291, N=108)^{1,2}
- Administered as an outpatient treatment

For more information, visit www.TheraSphere.com

TheraSphere is authorized by Federal Law for use as a humanitarian device in radiation treatment or as a neoadjuvant to surgery or transplantation in patients with unresectable HCC who can have placement of appropriately positioned hepatic arterial catheters. The device is also indicated for HCC patients with partial or branch portal vein thrombosis/occlusion, when clinical evaluation warrants the treatment. The effectiveness of this device for this use has not been demonstrated.⁴

a - Refers to high specific activity.

b - Patient benefits as indicated by PI: HCC patients with PVT are eligible for treatment, majority of events graded as mild to moderate, treatment usually performed on an outpatient basis.

References: 1. Salem R, Lewandowski RJ, Mulcahy MF, et al. Radioembolization for hepatocellular carcinoma using yttrium-90 microspheres: a comprehensive report for long-term outcomes. *Gastroenterology*. 2010;138:52-64. 2. Hilgard P, Hamami M, Fouly AE, et al. Radioembolization with yttrium-90 glass microspheres in hepatocellular carcinoma: European experience on safety and long-term survival. *Hepatology*. 2010;52:1741-1749. 3. Lewandowski RJ, Kulik LM, Riaz A, et al. A comparative analysis of transarterial downstaging for hepatocellular carcinoma: chemoembolization versus radioembolization. *Am J Transplant*. 2009;9:1920-1928. 4. TheraSphere® [US package insert]. Ottawa, ON: Nordion (Canada) Inc.; 2011.

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SCIENCE ADVANCING HEALTH

Nurse/Technologist Symposium Addresses Radiation Safety

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The full-day symposium Innovations in Cardiac and Vascular Care: Advanced Interventions for Nurses and Technologists takes place today. It is designed to meet the needs of the extended interventional team. The director of the symposium, Jane Kiah, R.N., is the director of invasive services at Baptist Cardiac & Vascular Institute. Ms. Kiah, along with faculty member Dick Steuve, R.T., wrote the following article on radiation safety, one of the topics to be covered during the symposium. Mr. Steuve is a radiation safety consultant who provides on-site radiation safety courses for physicians, nurses and technologists who perform fluoroscopically guided vascular interventions.

Marie Curie died due to excess exposure to her discovery, radium. Thomas Edison invented the fluoroscope, but stopped his work in this area when his assistant died of an x-ray overdose. Many years later we have a better understanding of the dangers of radiation, and yet we often fail to handle it safely. It's easy to become complacent about the dangers of radiation: it is invisible and odorless, and often we're so caught up performing procedures that we overlook the tools that help us accomplish the goal. As a result, we may expose patients as well as ourselves to higher levels of radiation than necessary. The World Health Organization (WHO) has classified radiation as a carcinogen. The risks of excess radiation exposure aren't insignificant, potentially leading to a variety of health issues, from cataracts and hair loss to birth defects and the development of cancers.

The dangers of radiation in the hospital received significant attention early last year when the New York Times published a series of exposés on radiation therapy treatment accidents and overexposures. Consequently, the Food and Drug Administration (FDA), The Joint Commission and the Occupational Safety and Health Administration (OSHA) are among the entities paying closer attention to the issue.

Although the New York Times articles focused primarily on radiation therapy, radiation used for imaging – particularly during interventional procedures – also is of major concern. The top three sources of excessive and risky radiation are nuclear medicine, computed tomography (CT) and fluoroscopy, which often is employed in long exposures during endovascular procedures.

Those who regularly work with radiation need to take a long, hard look at their actions and ask them-

selves if they and their coworkers are doing everything possible to reduce exposure – for their own sake as well as for patients.

Why Is Radiation Safety an Issue?

One of the root causes of excessive radiation exposure arises from the fact that many in the health-care field who work with radiation have received only rudimentary radiation training. Whereas interventional radiologists are trained in the safe use of radiation, interventional cardiologists and vascular surgeons, for instance, typically receive minimal education in this area. Because they typically are unfamiliar with all of the sources of radiation exposure, they may know little about risk-reduction and safety strategies. Compounding the problem is that, while a radiologist's key aid is a radiologic technologist (who also has received radiation safety training), an interventional cardiologist or vascular surgeon's key aid is a nurse, who likely has received little to no radiation safety training. That's not to say that all radiologists employ best radiation safety practices either. Despite their training, many of them have become complacent.

Additionally, we often use far more radiation than necessary. In the United States, there is an increased emphasis on ensuring the highest quality images, which means more radiation. That's not the case in Europe and Japan, where safety is more highly valued. The ideal dose is the least amount of radiation possible to produce an acceptable image. A good operator knows how to produce good images without excess radiation.

Who's Keeping Tabs?

In most hospitals, radiation safety is the joint responsibility of the facility's radiation safety officer and the technologists who work in the department. The safety officer keeps track of healthcare workers' radiation exposure via the dosimetry badges that should be worn at all times and turned in every month for exposure assessment by an outside company. The American Council on Radiation Protection & Measurements allows that those who work with radiation can safely receive 5,000 millirems a year, in addition to what they receive in background radiation.

Once or twice a year the state typically performs an inspection. Additionally, the Joint Commission requires hospitals to have written procedures regarding the use of precautions and personal protective equipment regarding the use of hazardous materials – which in-

clude radiation and X-ray equipment. The commission requires that hospitals provide protective devices, such as lead aprons and shields, and show they are worn as required. They also require records be maintained regarding individual worker exposure as recorded by dosimetry badges.

But when no one's watching, it's easy to fall back into bad habits and complacency. Hospitals get busy and when a dosimetry badge value comes back

high, some clinicians choose not to wear a badge, rather than take the

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Jane Kiah, R.N.



Dick Steuve, R.T.

Industry Sessions Begin Tomorrow

Industry educational sessions complement the academic program at ISET by offering yet another opportunity for attendees to learn about advances within the field. Industry sessions focus on specific products and procedures and are not accredited. (Please note that food is not served at these sessions but that all attendees are welcome to bring either breakfast or lunch served in the ISET common areas to the session room so as to enjoy a meal as they learn.)

Monday, January 16

Challenges and Solutions in Complex Lower Extremities Interventions

7:00 a.m. - 7:50 a.m.

(Glimmer 1 & 2)

Presented by Medtronic

Faculty: William Gray, M.D., Juan Zambrano, M.D., and Robert Beasley, M.D.

Treating Critical Limb Ischemia – Key Decisions and Tools

12:20 p.m. - 1:30 p.m.

(Glimmer 1 & 2)

Presented by Cordis

Faculty: Tony Das, M.D., William Gray, M.D., and James Benenati, M.D.

Tuesday, January 17

New Treatment Modalities for IVC Filter Patients

12:00 p.m. - 1:00 p.m.

(Glimmer 1 & 2)

Presented by Bard Peripheral Vascular

Faculty: Anthony C. Venbrux, M.D., and Frank C. Lynch, M.D.

TruePath in the Landscape of CTO-Crossing: Tools, Techniques and Case-based Strategies for Success

12:00 p.m. - 1:00 p.m.

(Glimmer 6 & 7)

Presented by Boston Scientific
Faculty: John R. Laird, M.D., and Christopher LeSar, M.D.

Repositioning the Future of EVAR and New Options in Thoracic Aneurysm Treatment: The Impact of True Conformability

12:00 p.m. - 1:00 p.m.

(Glimmer 3 & 4)

Presented by Gore & Associates
Faculty: Gary Ansel, M.D., Mo Hamady, M.D., and Mark Farber, M.D.

Wednesday, January 18

Drug-coated Balloons: The Future for PAD?

12:00 p.m. - 1:00 p.m.

(Glimmer 1 & 2)

Presented by Bard Peripheral Vascular

Faculty: Barry Katzen, M.D., and panel

Optimizing Outcomes in SFA Treatment: The VIPER Results

12:00 p.m. - 1:00 p.m.

(Glimmer 6 & 7)

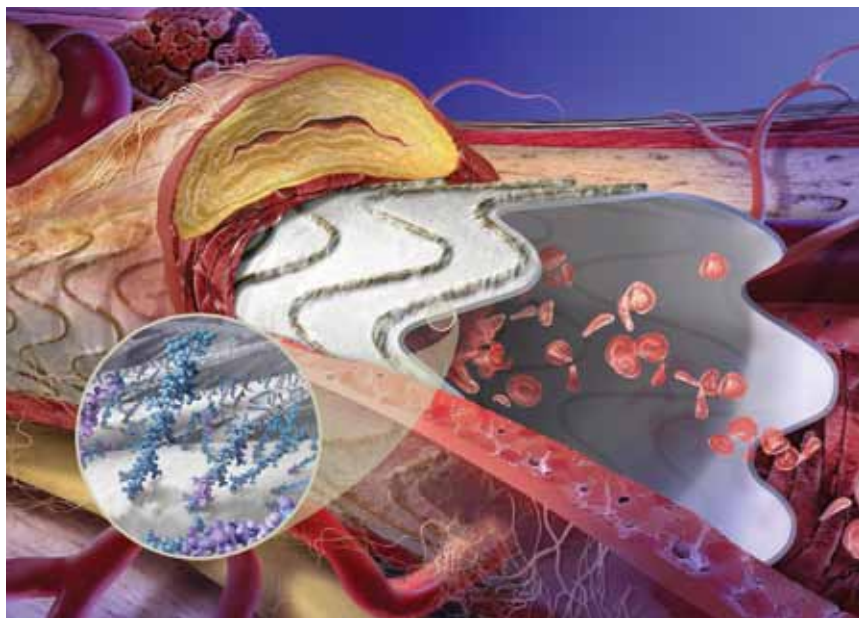
Presented by Gore & Associates
Faculty: Richard Saxon, M.D.

Advancing Techniques for Retrograde Tibiopodal Access

12:00 p.m. - 1:00 p.m.

(Glimmer 3 & 4)

Presented by Cook Medical
Faculty: Venkatesh Ramaiah, M.D., Aravinda Nanjundappa, M.D., and Yazan Khatib, M.D.



Please Join Us

Tuesday, January 17

LUNCH SYMPOSIUM, GLIMMER ROOMS 3 AND 4

12:00–1:00 pm

**Repositioning as an insurance policy for EVAR:
benefits for both straightforward and challenging anatomies**

Gary Ansel, MD

**New options in thoracic aneurysm treatment:
the impact of true conformability**

Mo Hamady, MD

New options in acute thoracic treatment

Mark Farber, MD

Wednesday, January 18

LUNCH SYMPOSIUM, GLIMMER ROOMS 6 AND 7

12:00–1:00 pm

**Optimizing outcomes in SFA treatment:
The VIPER results**

Richard Saxon, MD

To comply with current AdvaMed Code of Ethics, state laws and Gore policies, Gore reminds you that only program attendees may attend the reception and meal portions of the program. Spouses, family members or other guests cannot attend Gore programs or meals.

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Radiation Safety

Continued from page 6

time to determine the cause. What's particularly unfortunate is that the causes of the high dosimetry numbers often are easily resolved, and taking care of those issues would benefit both the individual worker and everyone else around him or her.

Making Improvements in Radiation Safety

The good news is there are numerous ways healthcare facilities can make radiation safety improvements. An excellent first step is to require that all who work with or around radiation – including physi-

cians, equipment operators, technologists, nurses, anesthesiologists and any others – take a radiation safety course. Although some may argue there is no time in the work day for this, it must be made a priority. California, for instance, requires anyone who works with fluoroscopy – including technologists, physician's assistants, nurses and physicians – to attend a fluoroscopy class and be issued a permit.

It is also important to foster good communication among the healthcare team, and ensure that everyone understands radiation safety is his or her job. Nurses and technologists must be encouraged to speak up if they are concerned about safety practices. Physicians

must be made to know that their support staff is required to speak up and that they need to take those concerns under consideration and not ignore them. The U.S. military has created a system of openness and communication, where all team members are expected to speak up and make suggestions. Unfortunately, this isn't part of the culture at many hospitals.

Dose reduction also is important because radiation scatter from the patient causes the most exposure to workers. Controlling patient dose, therefore, benefits workers as well as patients. That includes minimizing fluoroscopy time as well as the number of fluoroscopic images.

Shielding is another important

safety mechanism, and there are many types in existence. It's important to not only use all that are available (requesting additional shielding, if appropriate), but to use them effectively. Shielding includes personal items such as leaded glasses and aprons with thyroid shields; equipment-mounted protective drapes (particularly important for eye protection during interventional procedures); rolling and stationary shields; and disposable patient drapes to prevent scatter radiation. Architectural shielding is required in any room where radiation is used and must have a predetermined thickness of lead in the walls, doors, windows, etc.

Additionally, there are numerous positional and equipment-related radiation safety features, which require full knowledge not only of the equipment, but of the properties of radiation. Again, those who don't have a radiation background are at a disadvantage because they don't fully grasp how radiation works and, therefore, how to work with it more safely.

Technologists should make full use of radiation-reduction features built into the equipment. Manufacturers should be requested to regularly provide training for new workers, who may be unaware of the equipment's safety features. Operators should learn how to use and position the system around the patient to ensure the lowest radiation dose to the patient and workers. Positioning can be done effectively or poorly, and again, physicians and healthcare workers must learn about the benefits and trade-offs.

In particular, one area that is often overlooked is the positioning of the tube that produces the X-ray, which passes through the patient to the detector. The detector should be as close to the patient as possible, in order to block scatter radiation, improve image quality, and require less radiation. During procedures such as cardiac angioplasty and stenting, many operators consider it a convenience to have the detector further away from the patient so it is more easily moved around the patient. Unfortunately, this results in 50 to 60 percent more radiation to the patient if it's done incorrectly.

Radiation is an important diagnostic tool, but it must be treated with respect. It has become apparent that there is significant room for improvement in radiation safety practices, which can vary widely from institution to institution and from clinician to clinician. All who work in hospital radiation environments – technologists, nurses, physicians and others – must make a commitment to the safer use of radiation, for the good of everyone.

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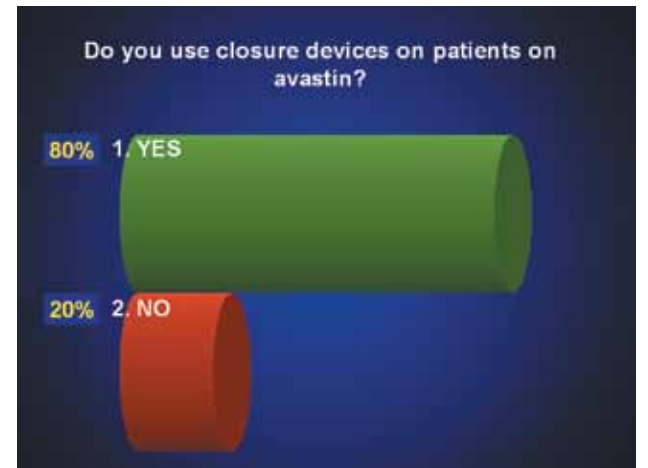
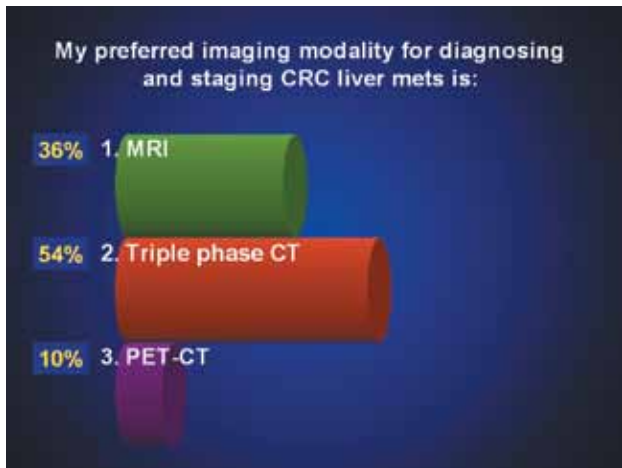
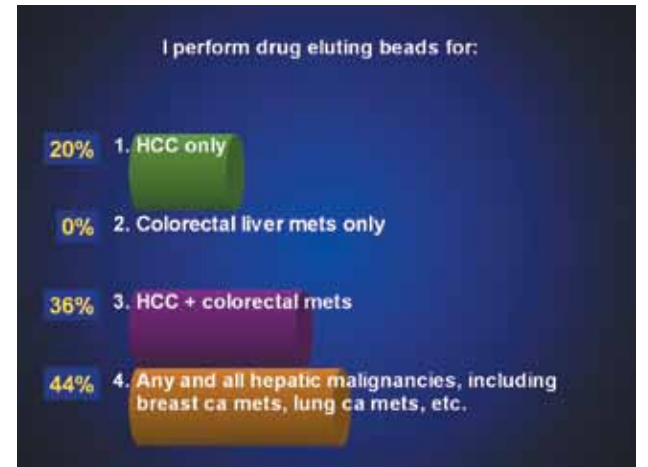
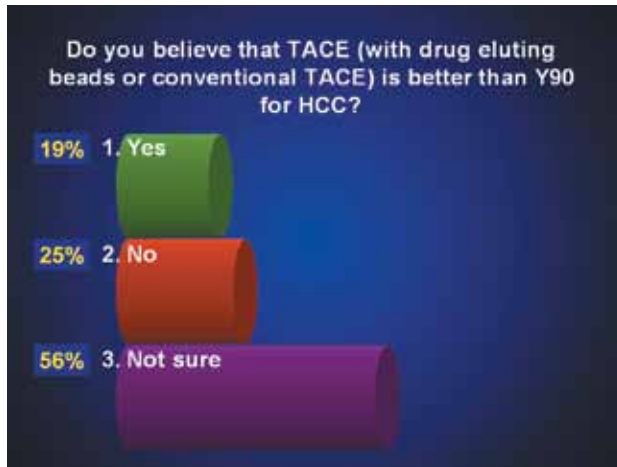








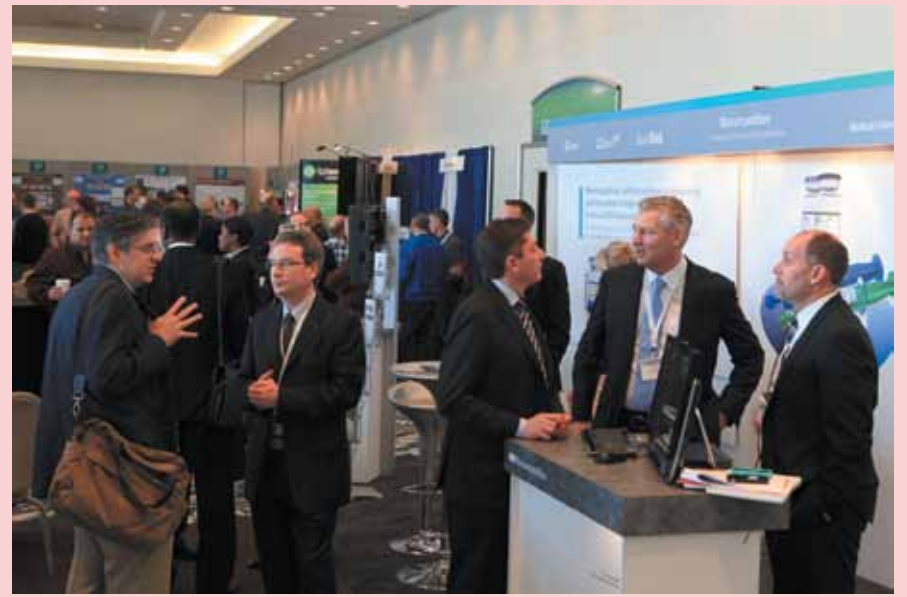
CIO Polling Results from Saturday



CIO in Action



Riccardo Lencioni, M.D., speaks during Saturday's Focus Session on Drug-eluting Embolics.



Exhibitors and attendees mingle in the CIO Exhibit Hall.



Now in its fourth year, CIO continues to draw a larger attendance each year.



Julien Namur, Ph.D., right, speaks during the Saturday industry educational session hosted by Merit, as Katerina Malagari, M.D., looks on.

Minimally Invasive Procedures, Patient Needs Among Focuses of CIO Exhibitors

Today is your last chance to visit the Clinical Interventional Oncology (CIO) Exhibit Hall (7 a.m. to 4 p.m.). Twenty companies are showcasing products and technologies of interest to both CIO and ISET attendees.

As both the CIO meeting and the field of interventional oncology itself grows, exhibitors recognize the industry is changing.

“The last few years have seen incredible advances in the field of interventional oncology (IO), including improvements in the quality, utility and performance of products,” said Stewart Pearson, marketing manager for Sirtex Medical. “These advancements have been accompanied by a greater acceptance and belief among other disciplines, such as medical and surgical oncologists, as to the benefits products in the IO arena can confer.”

In particular, minimally invasive approaches are increasing in demand.

“A significant change in the field of interventional oncology during

the past five years is the increased opportunity for interventional radiologists to add more minimally invasive treatment options to their practice,” said Marty Emerson, president and CEO of Galil Medical. “In particular, research and data support the outcomes, procedural image guidance and patient benefits of cryoablative technologies.”

Pearson added that patients are also having an impact on the industry. “It is important to note that the influence of the patient has changed significantly over this time period,” he said. “Patients want to be more informed, to understand their choices and to partner with their healthcare professionals. These changes have influenced physicians and industry alike to adapt and become more involved in the multidisciplinary approach to the treatment of cancer, which is a positive approach.”

The unique audience that CIO attracts helps exhibitors showcase their product line to potential new customers.



J. John Straub, M.D., and Marie-France Giroux, M.D., look over a catheter using the Surefire Infusion System from Surefire Medical, Inc.

“This meeting allows Sirtex to interact with many interventionists who may not be familiar with the SIR-Spheres microspheres treatment as well as to reinforce our qualities with those who already believe in our position within the treatment paradigm,” Pearson said.

“We must ensure that the broadest possible group of interventional oncologists who treat patients with metastatic colorectal cancer have learned of our full FDA indication, the attributes of SIR-Spheres microspheres and Sirtex’s commitment to the patient.”

Featured in the CIO Exhibit Hall

“Galil Medical will highlight two new needles. The IceRod® PLUS Cryoablation Needle, is an ultra-thin 17G needle with a very narrow profile, and the IceEDGE™ 2.4 Cryoablation Needle, a small profile needle that produces the market’s largest iceball.”

– Marty Emerson, president and CEO, Galil Medical

“Sirtex Medical will showcase the efficacy and safety data which make SIR-Spheres® microspheres the only fully FDA approved microspheres for the treatment of colorectal cancer which has metastasized to the liver. Discussing the data and our product with our team will allow interventional oncologists to partner with their multidisciplinary colleagues and ensure that their patients are offered the most appropriate treatments, at the most appropriate time, thus maximizing clinical outcomes.

– Stewart Pearson, marketing manager, Sirtex Medical



Attendees take time to speak with representatives from Nordion in the CIO Exhibit Hall during a coffee break on Saturday.

CIO Exhibitors

Today’s CIO Exhibit Hours
7:00 a.m. – 4:00 p.m.

Company Name	Booth #
AngioDynamics	14
B Braun Interventional Systems, Inc.	7
Biocompatibles	2
Boston Scientific	9
CareFusion	10
CeloNova BioSciences Inc.	17
Delcath Systems, Inc.	16
Digitell	6
Galil Medical	13
Healthtronics - Endocare	15
Intio, Inc.	20
Medtronic	5
Merit Medical/BioSphere Medical	12
NeuWave Medical, Inc.	1
Nordion	18
Onyx Pharmaceuticals	3
Philips Healthcare	19
Rex Medical	11
Sirtex Medical Inc.	4
Surefire Medical, Inc.	8

CIO Industry Session Today

Expanding Experience with Chemosaturation
Presented by Delcath Systems
12:10 – 1:10 p.m.
Flicker Ballroom

Carotid Stents

Continued from page 3

In general, Tsoukas concluded, "A patient with a stellar heart is often considered to be better off with surgery, especially in the presence of calcified or tortuous access vessels."

Another area of interdisciplinary cooperation in the Institute's carotid disease program is the commitment to accreditation for any facility where carotid stenting is performed, Benenati said. "All the medical societies agree that carotid stenting should be provided only in facilities accredited by ACE or ICACSF to ensure adequate operator training, experience and CME, as well as the proficiency of technicians and nurses and the documentation of all outcomes and follow-up in all cases."

Accreditation for Cardiovascu-

lar Excellence (ACE) was launched by the Society for Cardiovascular Angiography and Interventions (SCAI). The Intersocietal Commission for the Accreditation of Carotid Stenting (ICACSF) was created by the Society for Vascular Surgery, the Society of Interventional Radiology and the Academy of Neurology, among other specialty groups.

Complication rates in both the Institute's CEA and CAS programs fall well below American Heart Association benchmarks. For example, in a 2011 Institute study of 80 consecutive CAS and CEA cases, the 30-day periprocedural stroke and death rate was below 2 percent.

Institute physicians have implanted more than 500 carotid stents since 1996, frequently under the exacting technical requirements of clinical trials. In fact, the Institute was first in the region to participate in the multicenter SAPHIRE clini-

Level I science from the 10-year, 2,502-patient CREST trial convinced FDA experts to expand the indication for carotid stenting to all-risk symptomatic and asymptomatic patients. That data was presented at the February 2010 American Stroke Association meeting, and reported in the *New England Journal of Medicine*.

CREST data showed that carotid artery stenting was associated with a 7.2 percent rate of adverse events versus 6.8 percent for endarterectomy, a non-significant difference. At 30 days, the rate of mild stroke was higher with stenting, at 4.1 percent versus 2.3 percent for CEA. The rates of major stroke were equal: less than 1 percent in both groups. MI was more frequent in the CEA group: 2.3 percent versus 1.1 percent for stenting. Rates of ipsilateral stroke on mean follow-up of 2.5 years were 2.0 percent for stenting and 2.4 percent for surgery.

cal trial, which provided the first scientific evidence for the non-inferiority of CAS vs. CEA.

Institute interventionists and vascular surgeons also participated in the landmark CREST trial, and Institute Founder and Medical Director Barry T. Katzen, M.D., served on the trial's Interventional

Management Committee.

When CAS is indicated, the Institute's deep reservoir of experience and its access to a full portfolio of carotid stents, embolic filters and flow reversal devices allow it to refine device selection and customize technique to a degree unsurpassed in the region.



Lee Fox, M.D., center, discusses a poster with ISET Course Directors Alex Powell, M.D., left, and Adam Geronemus, M.D., in the CIO Exhibit Hall. The CIO Best Poster Award will be presented today immediately following the lunch hour.

Question of the Day

Interventional oncology has taken hold in practices that previously were devoted exclusively to endovascular procedures. Is this the case in your practice? If so, tell us a little about the decision making that preceded your adding an IO service line.

"We have always been involved in IO. The catheter and image-guidance skills are similar, and the degree to which you have to engage clinically with patients and other medical specialties to be successful is the same. Rather than supplanting or replacing endovascular procedures, the emerging importance of IO has allowed us to grow."

Alain T. Drooz, M.D.
Falls Church, Va.

"Due to limited availability of vascular and oncology interventionists in Puerto Rico, volume is persistently high for oncology and peripheral interventions. Since there is no competition in oncology, our overall volume is higher in this area, hence growth is easier for oncology."

Jorge Arzola, M.D.
San Juan, Puerto Rico

"I'm within five years of training and learned most of these techniques in fellowship and currently over 50% of my practice is IO."

Jim Picotte, M.D.
Traverse City, Mich.



ISET 2012 on Twitter

We're making it easier for you to get real-time news and announcements coming out of the 24th annual International Symposium on Endovascular Therapy (ISET). Just follow the event on [Twitter](#) — the free social networking tool that's simple to use (we'll tell you how right here!).

ISET will host a Twitter feed providing ongoing news and announcements, as well as updates on newsworthy presentations and insights from Course Directors.

Sign up

If you're new to Twitter, just follow these easy steps:

Step 1: Sign up for a Twitter account at <http://twitter.com/>. It's free and takes less than a minute. (When you sign up, you're given the option of having the "tweets" (updates) delivered directly to your mobile phone. If you don't opt for this, you get the latest by simply logging in to your Twitter account.)

Step 2: Visit www.twitter.com/ISETNews and click "follow."

Step 3: Then, simply check your Twitter home page for the latest news from ISET! The posts you'll receive will be short (Twitter requires them to be less than 140 characters) and will usually end with the "hash tag" #ISET.

We'd like to get everyone at ISET involved in the ISET Twitter feed so please take a moment and sign up today.

Dialogue with others at ISET using Hash Tags

Hash tags are how Twitter organizes information, and they can be very useful. If you want to start a conversation with other Twitter users regarding ISET, simply send a tweet and enter #ISET at the end. To follow what others are saying about the meeting, visit www.TweetChat.com and enter ISET at the top. Any tweet with the ISET hash tag will automatically appear in real time.

Featured Saturday tweet:

@tinopena2 – Great morning session. We need to keep enrolling into trials if we are going to keep the field progressing!!

ISET Mobile App

Download the ISET 2012 app from your mobile device's app store to get information about the meeting from the convenience of your phone, tablet or laptop. Access ISET's program, faculty list, supporter list, exhibitor list, hotel floor plans and more. See what others are tweeting about the meeting and post to Twitter and Facebook from within the app. You can also read each day's digital version of ISET Today by clicking on the app's logistics tab.



The POWER of ONE

It starts with you.

At Covidien, we recognize that achieving better outcomes in vascular care begins with a commitment to you. It is why we continually invest more in innovation, education, and clinical evidence. It is also why ev3 is now part of Covidien, creating the broadest portfolio of products for peripheral, venous, and neurovascular diseases. It all gets down to helping you preserve life and limb, because in the end, that is where the power of one matters most.

