



**IR**  
*news*

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**JOIN US IN ROME!**  
**CIRSE 2006**  
**September 9-13**

**CIRSE**

Cardiovascular and Interventional Radiological Society of Europe

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## Dear Interventionalists,

In the last 6 months numerous activities took place within CIRSE. Our young and enthusiastic new team in the Vienna office is preparing our annual meeting in Rome. Mick Lee and his programme committee team have prepared an outstanding programme and we will enjoy a new and entertaining opening ceremony. A record-breaking 905 abstracts were submitted for oral presentations, as well as numerous EPOS posters. We are also experiencing an unprecedented interest in booths space from the industry, so we can expect a great meeting in Rome.

Another positive development is that the four CIRSE Task Forces are up and running. The Clinical Involvement Task Force (members: Johannes Lammer (Chair), Trevor John Cleveland, Miguel A. De Gregorio, Thomas J. Kroencke, Niall McEniff, Alexis D. Kelekis, Manuel Maynar, Robert A. Morgan, Gerard J.O'Sullivan, Siegfried A. Thurnher, Dimitrios Tsetis, Raman Uberoi) is beginning to prepare manuals for your daily clinical practice and the Simulator Task Force (members: Derek Gould (Chair), Gary Becker, Nicholas Chalmers, David Kessel, Michael Lee, Alpen Patel (Chair SIR Medical Simulator Task Force), Jim A. Reekers, Marc Sapoval, Luc Stockx) is preparing guidelines regarding the future of virtual reality training.

The Task Force on E-Learning and Education (members: José Ignacio Bilbao (Chair), Robert A. Morgan, Jim A. Reekers, Jan H. Peregrin, Hervé Rousseau, Hans-Joachim Wagner) is preparing learning programmes and foundation courses for CIRSE 2007 and ECR 2008 as well as an online test. The UFE Task Force (members: J-P. Pelage (Chair), A. Fauconnier, T. Kröncke, A. Nicholson, J. Reekers, J. Spies, M. Trojanowska) has also been set in motion.

The European School of Interventional Radiology (ESIR) has had a very successful start with a basic course on vascular interventions in Lublin, Poland and an advanced course in Kuopio, Finland and we are already planning further courses on vascular and oncology interventions for 2007.



During our annual meeting in Rome we will honour interventional radiologists who have made outstanding contributions to IR and CIRSE. Prof Rosenberger and Prof Simonetti will become Distinguished CIRSE Fellows. Prof Alex Rosenberger was born in Novi Sad, Yugoslavia. He survived the Second World War and the concentration camps as a youth. In 1954, he graduated from the Hebrew University Medical School in Jerusalem. He received his angiographic training in 1966/7 at Stanford University School of Medicine under the tuition of Prof Herbert L Abrams.

For 22 years Prof Rosenberger headed the Department of Radiology at Rambam Medical Center in Haifa and taught as a Professor of Radiology at the Faculty of Medicine of the Technion - Israel Institute of Technology, Haifa. He established the Angiographic and Interventional Service at Rambam and is one of the founders of Interventional Radiology in his country. For more than 20 years he was the president of the Israel Radiological Society. Prof Rosenberger is also one of the founding members of CIRSE and was the president of its congress in Jerusalem in 1986.

Prof Giovanni Simonetti was born in Oristano, Sardinia. In 1972 he started working at the Institute of Radiology of the University of Rome "La Sapienza", where he became an Assistant Professor in 1982. In December 1982 he was appointed Associate Professor of Radiology at the School of Medicine and Surgery of the University of Sassari. In 1983 Prof Simonetti was appointed Chairman of the Institute of Radiological Sciences and Director of the School of Radiological Diagnosis and Cancer Radiotherapy of the University of Sassari. Since 1990 he has been a Professor of Radiology and the director of the Faculty of Radiology at the School of Medicine and Surgery of the University of Rome "Tor Vergata". Prof Simonetti was the first doctor in Italy to perform the embolization of a GI haemorrhage (1971) and a PTA of a stenosis of the iliac artery (1973). From 1983 to 1987 he served as president of the Italian Section of Vascular and Interventional

Radiology. In 1987 he co-organized the annual CIRSE meeting in Porto Cervo. Since 1988 he has been organising a yearly Campus of Interventional Radiology for young radiologists. He is also the organiser of the International Course on Endovascular Procedures (ICEP).

Prof Barry T. Katzen will receive the CIRSE Gold Medal. Prof Katzen considers himself to be "European trained", since his fellowship time was spent at the Policlinico Umberto Primo "La Sapienza" (University of Rome) under the direction of Prof Plinio Rossi. After returning to the United States, he became the Director of Cardiovascular Radiology at St. Vincent's Hospital Medical Center in New York. During his time there, he established the use of angioplasty and thrombolysis thanks to a collaborative relationship with vascular surgery.



*B.T. Katzen, P. Rossi, G. Simonetti and R. Passariello*

In 1976 Prof Katzen established the Non-invasive Vascular Laboratory and Interventional Radiology Programmes at Alexandria Hospital in Virginia. During his time in Alexandria, he pioneered the use of video and sophisticated audiovisual technology to enhance the process of education for established practitioners. He is credited with being the first doctor to use "live patient demonstrations" in the United States, which went on to become the benchmark for procedural education in endovascular therapy. In 1987 Prof Katzen moved to Miami, Florida, to found what was then called the Miami Vascular Institute at Baptist Hospital. Today he is a clinical Professor of Radiology at the University of Miami School of Medicine.

Prof Katzen has been passionate about transforming Interventional Radiology from a technical to a clinical discipline through his writings and teaching. His brand of clinical practice has been emulated by many others throughout the United States and Europe. He is a past president



>> of the Society of Interventional Radiology (SIR) and was part of its Executive Committee for many years. He has been awarded the Society of Interventional Radiology's Gold Medal for lifetime achievement. Prof Katzen has also been a teacher at the annual CIRSE meetings since its early days in the eighties.

I must say that it is a pleasure to look at the past and honour those CIRSE members who have helped making Interventional Radiology what it is today. Their work contributed to Interventional Radiology dramatically revolutionising the practice of medicine. Today every major hospital wanting to provide state-of-the-art medical care for its patients has to offer IR procedures. Most vascular surgical procedures are being replaced by minimally invasive IR procedures, such as angioplasty and stenting. Minimally invasive IR procedures like TACE and RFA also supersede more and more surgical procedures in oncology.

Nevertheless, we should not forget one thing; for many years we concentrated on the development and establishment of IR procedures, but forgot to develop our full clinical responsibility vis-à-vis our patients. In 1980 Charles Dotter wrote in the American Journal of Radiology: "If we don't assume clinical responsibilities for our patients, we will face forfeiture of our territorial rights based solely on imaging equipment others can maintain and skills others can learn." Now that IR procedures are accepted as standard of care for many diseases, doctors of other disciplines such as cardiology, vascular surgery, gynaecology, general surgery and hepatology try to learn and copy the techniques which initially were developed by interventional radiologists.

Considering this development we have to ask ourselves: If they can try to learn our techniques, why shouldn't we learn what they do, i.e. clinical care? I am sure that we are capable of doing clinical care as well as any other surgeon. However, we may have to refresh our clinical knowledge. For this purpose our annual meeting will offer a large number of courses and workshops on good clinical practice. You do not have to become a specialist in primary treatment of diabetes, hypertension or ascites, but you should be able to give your

patient advice on the best medical treatment for each condition and know in which cases you should call a specialist.

Clinical practice is a necessary part of Interventional Radiology. In order to be accepted as "real" doctors, interventional radiologists have to provide pre-procedural consultation and post-procedural care in addition to performing their procedures. Those who perform IR procedures without clinical follow-up of their patients may be accused of carelessness, especially when complications occur. It is bad practice to perform an interventional procedure without follow-up on the patient in order to see if and to what extent the treatment worked and whether or not the patient is satisfied. An SIR survey has shown that 92% of interventional radiologists in the USA make rounds after the procedure but only 52% post-procedure office visits. I sincerely hope that all CIRSE members show more clinical responsibility than that!

A hospital-based interventional outpatient clinic or an office-based private clinical practice is an important cornerstone of interventional clinical practice. It will serve as a front door through which patients will directly enter your practice. We have to learn that "ownership of the patient" is an important factor in the daily life of clinical medicine.

In the next years we have to focus on obtaining complete clinical care of our patients. In this, the four cornerstones of interventional medicine must be

- an office for the first patient contact and examination (private or hospital based),
- direct admitting privileges and dedicated IR beds on a specialised ward,
- the procedure,
- post-procedure care including a follow-up programme.

A large part of CIRSE's activities focus on enlarging our responsibilities in clinical care and I hope that all of you will contribute to achieve this goal. It may mean a major change to your daily practice, but it will secure the future of IR and that of our young colleagues.

I look forward to seeing you all in Rome

Johannes Lammer



## Good Clinical Research Awareness Programme

by Jim Reekers

**If we want Interventional Radiology to be considered a serious clinical specialty, we have to provide good clinical research to justify this aim.**

It is often said that a randomized control trial (RCT) is the most reliable evidence for decision making in medicine, although sometimes we can also work with other study designs. In the current world of "evidence based" medicine one would easily think that everything is dictated by the various levels of evidence: level 1 (an RCT or a systemic review) being the highest to level 5 (expert opinion or a registry) being the lowest level of quality.

As an RCT is the highest level of evidence that can be achieved, this study design should be used whenever possible. One of the most important conditions for an RCT to be successful is sufficient unbiased patient inclusion. This can only be achieved if patients and doctors think that both treatment options are more or less equal (unbiased patient selection). An early claim of superiority of either treatment option will make unbiased inclusion of new patients almost impossible. A good example is the EVAR trial in which high expectations regarding the endovascular treatment were never widely advertised. Two year follow-up EVAR data now prove that claiming the superiority of endovascular treatment would not have been justified.

In the case of UFE the opposite happened; an early non-scientific claim on superiority blocked the possibility for an RCT in many countries. Nevertheless, a landmark study like EVAR proved that there is a clear difference between believing that a certain procedure is the best treatment option and actually knowing it. Although we should always try to perform an RCT, it might have lim-

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>> itations as well. Sometimes an RCT focuses on a specific group of patients, based on rigid inclusion and exclusion criteria, which can make its results not generally applicable to a larger population. It might also be impossible to blind patients for the randomization results, which may bias the outcome of the trial. Although RCT is the best study design there is, it is sometimes not possible to obtain level 1 evidence due to various reasons. A good example for this is PTA of stenoses of the iliac artery. There is only level 3 and 4 evidence (prospective study with or without a historical control) for PTA. Nevertheless, it would nowadays be unethical to start an RCT comparing PTA to bypass surgery, so sometimes we have to live and act with what we have.

Not only ethical problems can impede a randomized trial, but also the heterogeneity of the study population, like in congenital arteriovenous malformations, which can be problematic regarding randomization. In addition the study population might be very small (only a few patients per year), making randomization very unpractical. Even in situations in which randomization seems very obvious, like in the already mentioned EVAR study for the treatment of abdominal aortic aneurysms, the interpretation of randomized data can sometimes be difficult due to rapidly developing technology. For this reason, patients who are included in the study at an early stage may differ from recently included patients.

Nevertheless, if a randomized trial can be performed to compare the gold standard with a newly emerging therapy, it should always be done. If we take UFE as an example, we can see that there is an overwhelming amount of data from some level 3, but mostly level 4 and 5 publications, which prove the safety and

efficacy of UFE. National bodies like NICE (UK) and the FDA (USA) recognize this fact. Although long term follow-up is not available yet, UFE is, for good reasons, considered to be an excellent treatment for symptomatic fibroids.

However, this is only one side of the coin; the other side is not so shiny, since the gynaecologists, those who control the patients, might not share the beliefs of interventional radiologists. Looking at their literature, something we tend to forget, we realize that their view on things is completely different. They see UFE as an interesting technique, maybe even with potential, but for them it is just one of the many new developments they see every year.

We have to provide level 1 evidence in order to at least have a chance to convince them of the benefits of UFE. Otherwise interventionalists in Europe will only see those patients who are emancipated enough to search the internet before they have their uterus removed. Unfortunately, a proper study on this very biased group of patients runs the risk of scientific opportunism. Furthermore we have to provide strong arguments if we want to convince the insurance companies and health authorities. Remember that compared to gynaecologists interventional radiologists are, also to the general public, an unknown species without any political power. In order to convince, we simple have to produce better evidence (apart from patient control, but that is a completely different story). This is why an RCT on UFE comparing embolization to hysterectomy is so important. Shouting out loud how great we are will at the end of the day not get us very far.

CIRSE considers helping its members with good clinical research one of its major tasks. Good clinical research starts

with knowing all the ins and outs, the regulations and the pitfalls of clinical research. It would be a waste of time to conduct a trial only to find out at the end that the study is flawed by design or regulation errors. Although we see more and more good research in Interventional Radiology, many of the current studies and publications are not performed according to internationally accepted standards for good clinical practice.

In order to get one's work published in high ranking journals, the implementation of good clinical is mandatory. European as well as a growing number of local healthcare authorities have introduced good clinical practice in their regulations concerning clinical trials. For all of these reasons, it is essential to know about it before starting one's research.

CIRSE provides the opportunity to learn more about this topic with a Good Clinical Research Awareness Programme. I would urge all of those who are interested in starting clinical research in Interventional Radiology to attend this unique course.

**Please refer to page 10 for a detailed schedule of the Good Clinical Research Awareness Programme at CIRSE 2006.**

## Robot-Assisted Biopsy

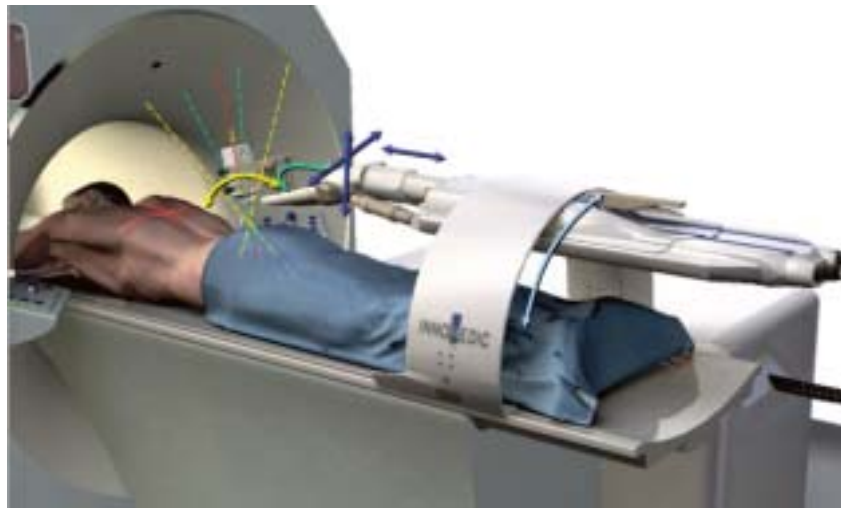
by Joachim Kettenbach<sup>1</sup>,  
Gernot Kronreif<sup>2</sup>, Andreas Melzer<sup>3</sup>

**Percutaneous biopsies performed using ultrasound (US), computed-tomography (CT) or magnetic resonance (MR) for imaging guidance have shown to be a safe and reliable alternative to excisional surgical biopsy. The high efficacy of these techniques, however, depends on the accuracy of the needle placement and the quality of the harvested tissue.**

At times, access to a target can be technically challenging due to various factors, including limited space at the skin entry site or a difficult angulated access. To improve the accessibility of lesions, surgical robots and manipulators have potential advantages that are well known in the clinical and technical community. Medical robotic systems, in particular, can provide accurate needle guidance and stable access, leading to increased precision, accuracy, and reproducible sampling of different parts of a lesion. Thus, greater efficacy can be anticipated, particularly for lesions that are difficult to target.

Recent developments in this field include prototype robotic systems designed for US-, CT- and MR-guidance (B-Rob family by ARC Seibersdorf Research and InnoMotion by InnoMedic). Robotic system B-Rob I, for example, uses an optical tracking system in order to obtain the target coordinates for the robot. During in-vitro biopsy tests only one needle pass was necessary to obtain a biopsy specimen from targeted peas that had a mean transverse diameter of  $9.3 \pm 0.1$  mm. The average duration of the procedure including targeting, planning, biopsy, and retrieval of specimens was 2.6 minutes. Other approaches for robot registration directly use information from CT or MRT data for (semi)automatic registration (e.g. B-Rob II, InnoMotion).

In order to achieve the same degree of precision as during the in vitro tests,



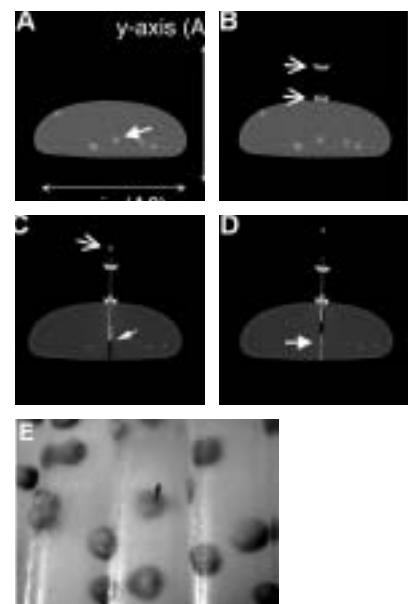
*The fully MR-compatible pneumatic robotic assistance system developed by Melzer et al. provides 6 DOF guidance and optional remote biopsy needle insertion*

small movements of the patient could be registered with a tracker tool attached to the patient's surface in the clinical application of this method. Furthermore, an immobilization device (BodyFix immobilization device, Medical Intelligence) has proven to be very useful in order to reduce the patient's movement during the intervention. Another focus is the development of registration technology that compensates the movements of the patient's organs when breathing.

Robot-assisted biopsy may expand the time window to explore a lesion when using new ultrasound agents, since more time can be spent on targeting the lesion. The robot then can guide the needle into the most promising region of the lesion without the need of a second contrast injection.

Robot-assisted biopsies are of great clinical value for the following reasons:

1. They provide very stable needle guidance, even for angulated approaches.
2. They allow access to lesions when the presence of the US transducer would limit the access for the biopsy needle (intercostal approach).
3. They assist the radiologist when performing the coaxial biopsy or doing a US check from a different approach while advancing the needle.



**(A)** CT scan of the gel phantom with embedded target peas. The white arrow shows the pea selected for biopsy  
**(B)** After moving the needle-positioning unit (NPU) of the robot system B-Rob I to its planned position, the 2 carbon fingers of the NPU (arrows) are lowered to "skin" level  
**(C)** A 17-gauge puncture needle with the rubber marker as a depth indicator (open arrow) is inserted along the needle guide about 3 cm into the phantom; streak artifacts obscure the targeted pea (closed arrow)  
**(D)** After the biopsy a short-cut guide wire (closed arrow) was pushed along the trajectory through the center of the target  
**(E)** The cut guidewire within the target as seen from below

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**Joachim Kettenbach is an Associate Professor at the Clinical division for angiography and interventional radiology at the Medical University Hospital of Vienna. He studied medicine at the University of Graz, where he received his MD in 1985. From 1996 to 1998 he participated in a research project at the Surgical Planning Laboratory of Harvard Medical School, Boston. Today his research focuses on percutaneous US- CT- and MR- guided interventions, the development of new techniques for tumorablation, as well as computer - and robot assisted procedures.**

<sup>1)</sup> Department of Radiology, Medical University Vienna, General Hospital, Vienna.

<sup>2)</sup> Robotics Laboratory, ARC Seibersdorf Research, Seibersdorf.

<sup>3)</sup> Radiology, Gelsenkirchen, Germany.

## Saturday, September 9

08:30-09:45

### Special Session: Robotics for Interventional Procedure

*Speakers: R.J. Bale, A. Melzer, J. Kettenbach, G. Kronreif, B. Siciliano*



*Set-up for a CT-guided robot-assisted biopsy procedure of the new prototype B-ROB II developed by Kronreif et al.*

## The Robotic Surgery Alphabet

### Degrees of Freedom

Robots are usually capable of movement along several axes. Each axe represents 1 degree of freedom. A robotic arm with 3 degrees of freedom can therefore move in three ways: left and right, forward and backward, and up and down. In addition, they can have up to three additional wrist movements on the end of the robot's arm: yaw (side to side), pitch (up and down), and rotational (clockwise).

### Dexterity Enhancements

Any technology designed to increase the precision of the surgeon's movements can be called dexterity enhancement.

### End-effector

The end-effector is the "hand" connected to the robot's arm, where tools can be exchanged and haptic feedback can be recorded.

### Frameless Stereotaxy

Frameless stereotaxy refers to the monitoring of the position and orientation of task specific tools and the displaying of these tools on diagnostic images of a subject or patient. This allows the operator to monitor the position of the tool with respect to the subject's anatomy displayed in the image area.

### Haptics

Haptics is the science of applying tactile sensation and control to interaction with computer applications. By using special input/output devices (such as joysticks or data gloves), users can receive feedback from the computer in the form of tactile sensations in the hand.

### Master / Slave

A so-called master-slave robot consists of a master manipulator, a large console, usually comprising a kind of joystick, and a slave, which is the "executing" part of the robot, usually a consisting of several arms working directly on the patient. Thanks to this system, surgeons can now operate on patients in remote locations (telesurgery). Furthermore, it enables the surgeon to carry out the procedure in a more ergonomically comfortable position.

### Medical Robots

Medical robots can be classified according to different features: by manipulator design (e.g., kinematics, actuation), level of autonomy (e.g., pre-programmed, teleoperated or constrained cooperative control), targeted anatomy, technique (e.g. cardiac, intravascular, percutaneous, laparoscopic, microsurgical), intended operating environment (in-scanner, conventional operating room), etc.

### Puma 560

In 1985 Kwoh et al. made use of an adapted version of the industrial robot Puma 560 to perform neurosurgical biopsies with greater precision. Three years later, Davies et al. performed a transurethral resection of the prostate using the same machine.

### Registration

Finding the corresponding points in the preoperative image data and points on the patient's anatomy on the operating table is referred to as registration.

### Robotics

Robotics is the term used for engineering involving the conception, design, manufacture and operation of robots. It overlaps with electronics, computer science, artificial intelligence, mechatronics, nanotechnology, and bioengineering.

### Supervisory Controlled System

In supervisory controlled systems the robot performs the entire procedure using a program preset by the surgeon.

### Telesurgical System

In a telesurgical system the surgeon manipulates the robotic arms during the procedure rather than allowing the robotic arms to work according to a pre-determined program.

### Shared Control System

Shared control refers to the type of robotic surgery in which surgeon and robot jointly perform the tasks.

### Teleoperation

The remote operation of a robotic device is called teleoperation.

## Promoting UFE through patient information, education and research

by J. P. Pelage

**Fibroids of the uterus were first treated with UFE in France and the U.S. in 1989. Since then, the procedure has become widely available and is now routinely performed in most European countries. In parallel to the growth of UFE, there has been a steep increase in scientific research and literature dedicated to UFE as a safe and effective medical procedure. Today, an estimated 10 percent of patients treated for fibroids in France undergo UFE and the numbers increase every year. If current trends continue, UFE is set to become the treatment of choice for myomas of the uterus in 10 years time. This would be good for both, patients and public health care budgets, since UFE is less invasive and less expensive than the established treatment methods of myomectomy and hysterectomy.**

However, for a number of reasons, this change in treatment preferences might take longer than hoped for. The principal reason for this is the lack of direct patient access by interventional radiologists performing UFE and the refusal of many gynaecologists to accept mounting evidence that many of their patients undergoing surgical treatment would be better off with UFE. Better informed patients are already asking their gynaecologists about UFE, but they are still a minority and most are unlikely to seek a second opinion.

Unless asked, many gynaecologists will not even refer to UFE as a possible treatment option. When challenged, gynaecologists routinely point to a perceived lack of scientific evidence clearly demonstrating UFE superiority over surgery. In addition, those who do accept UFE as a better treatment option in certain cases quite rightfully point out that there are simply no facilities offering UFE treatment in their area. Whilst the relationship with gynaecologists can be a difficult one, there is no sensible alternative to co-operation with gynaecologists who, after all, exercise close to 100 percent patient control.

In order to address some of the issues raised above, CIRSE has established a task force to provide advice on how best to promote UFE. The CIRSE UFE Taskforce intends to become active in three areas: public and patient information, support for IR colleagues already practicing or wanting to specialize in UFE, and collaborative research involving both, interventional radiologists and gynecologists.

### Public and Patient Information:

In many countries it is forbidden to advertise medical therapies. However, through the participation in radio shows, articles and/or interviews in newspapers and in other popular publications, UFE can be promoted quite effectively. Feedback received from the media and the public have demonstrated a great interest in UFE.

### Support for IR colleagues:

CIRSE has already produced "Quality Improvement Guidelines for Uterine Artery Embolisation for Symptomatic Leiomyomata." Further, similar guidelines might be developed and best practice may be shared by means of brochures and perhaps training for interventional radiologists already performing UFE or those wanting to specialize in UFE. Such information could convey experience as to what kind of patients respond best to which treatment, but also offer advice on how to develop good collaborative relations with gynecologists as well as pass on basic knowledge of gynecological conditions which are essential if a meaningful partnership is to develop. A course on gynecological disease might be suggested within the framework of ESIR.

### Collaborative Research:

Many good studies on UFE already exist and more data will become available in coming years. To take one example, the CIRSE Foundation UFE Registry has already enrolled over 450 patients and first results are expected in three years time. However, much of the research is not finding the echo it deserves within the medical community and particularly

amongst gynecologists. In view of this, a prospective study on post-myomectomy vs. post-embolisation fertility in young multi-fibroid women sponsored by CIRSE, the main European society of gynaecologists and other partners is suggested.

In order to achieve the above mentioned goals, leading gynaecologists will be invited to join the taskforce.

### Current members of the UFE Taskforce:

*A. Fauconnier  
T. Kröncke  
A. Nicholson  
J-P. Pelage (Chair)  
J. Reekers  
J. Spies  
M. Trojanowska*

### UFE Registry



## Last Call to Submit to the UFE Registry

The UFE (Uterine Fibroid Embolisation) Registry, supported by a research grant from Biosphere, Boston Scientific and Terumo, was launched in September 2004. Since then, more than 500 cases have been entered into the registry.

Registration will remain open until September 2006. We would like to thank all participants for their efforts to date and look forward to receiving further follow-up data.

## Basic Vascular Diagnosis: Interactive Case Session, CIRSE 2006

by Michael Lee

At this year's congress CIRSE will offer its first special session on basic vascular diagnosis. The presenters are myself and Dr. J. A. Kaufman from the Dotter Institute, Oregon. The aim of this course is to teach common pathologies that occur in day-to-day practice. The emphasis will be on basic angiographic diagnosis with some reference to CTA and to MRA.

The reason for the introduction of this course is that there has been a lack of exposure to basic vascular diagnosis in radiology curricula throughout Europe, a shift taking place towards imaging modalities. Obviously vascular diagnosis is important, particularly for those who want to pursue a career in Interventional Radiology. Furthermore it plays an important role in the diagnosis of many conditions such as polyarteritis, nodosa, takayasu's arteritis, etc., also applicable to the general radiologist.

The format of the session will include a number of cases presented to the audience, questions on diagnosis, differential diagnosis and pathology. Treatment strategies will then be asked in a true or false format. The attendees will have an electronic voting tool through which they will actively participate in the process and vote for the answers that they think are correct. At the end of the session, participants will hopefully appreciate the angiographic appearance of many common and some unusual vascular pathologies. We hope that this session will help junior interventional radiologists in their training and practising radiologists to refresh their angiographic diagnosis skills.

**The Basic Vascular Diagnosis Interactive Case Session will take place in Room B:**

**Monday, September 11**

10.15-11.30

Room B

## Vertebroplasty Hands-on Workshops



A. Gangi demonstrating the procedure

**Over the last few years, percutaneous bone punctures have become standard procedures in Interventional Radiology. Especially vertebroplasty, which has proven to be a highly efficient treatment for pain caused by spinal fractures and other conditions, is receiving increasing attention.**

Due to the rapidly ageing population of Western countries, osteoporosis and cancer-related spinal fractures are on the increase. An estimated 700.000 vertebral fractures will occur this year, resulting in approximately 150.000 hospitalizations. Thanks to recent advances in Interventional Radiology, these painful fractures, which have always been difficult to manage, can now be treated by an image guided injection of bone cement.

Numerous studies have shown that more than 90 percent of patients report instant and sometimes complete pain relief after the procedure. In the treatment of metastasised vertebrae, vertebroplasty has shown to provide a degree of pain relief which is usually only achieved after weeks of radiation.

These extraordinary results leave no doubt that vertebroplasty is one of the most promising interventional radiological procedures. CIRSE therefore offers a hands-on vertebroplasty workshop one day prior to CIRSE 2006.

The workshop will start with a 30 minute introduction to the principles and indications of the procedure, fol-



... and encouraging a workshop participant.

lowed by a hands-on demonstration. Participants will then have the opportunity to practice needle placement, injection and the preparation of bone cement. All procedures will be carried out on plastic spine models under fluoroscopic guidance.

The theoretical introduction and the hands-on demonstration will take place at the Policlinico Tor Vergata in Rome **one day prior to CIRSE 2006.**  
*Policlinico Universitario Tor Vergata  
Viale Oxford 81  
00133 Rome*

**The schedule for the individual workshops is as follows:**

**Friday, September 8**

**SIV-HWS 1**

09:00-11:30

**Friday, September 8**

**SIV-HWS 2**

13:00-15:30

**Friday, September 8**

**SIV-HWS 3**

17:00-18:30

*Instructors:*

*T. Sabharwal, A. Gangi, M. Bezzi, S.*

*Masala, G. Anselmetti*

**Please note that the number of participants for each workshop is limited to 15.**

The registration fee is € 50. In order to register for the Workshop, please tick the corresponding box when registering for CIRSE 2006.

## Dotter Lecture at the SIR 2006



*SIR President C. Lewis presented the award to A. Adam*

**A. Adam had the honour of giving the Dotter Lecture at this year's meeting of the SIR, which took place in Toronto from March 30th until April 4th.**

The recipient of this prestigious award is selected by the SIR President, based on extraordinary contributions in the field of radiology, dedicated service to the society and distinguished career achievements in Interventional Radiology. In the extremely well attended lecture entitled "Interventional Radiology: Veni, Vidi, Vanished" A. Adam spoke about the prospects for Interventional Radiology and his visions regarding the future of the field.

## New Position



The Senate of the University of Athens has appointed former Chairman of the CIRSE Foundation Advisory Council and current member of the CIRSE Foundation Board of Trustees **Professor Dimitrios Kelekis** Chief Medical Officer of the newly established Research Unit of Radiology and Medical Imaging.

CIRSE wishes Professor Kelekis the best of success for the seven years of his tenure of this important position.

## Film Interpretation Panel



*T. Nicholson moderating the Film Interpretation Quiz at the ECR 2006*

**T. Nicholson, Chairman of the CIRSE 2005 Scientific Programme, organised and moderated this year's Film Interpretation Quiz at the ECR.**

The session, in which a team of North American doctors competed against a team of European specialists, was one of the highlights of the ECR 2006.

The Film Interpretation Panels at CIRSE's annual meetings have also proven to be extremely popular with congress attendees, which is why T. Nicholson has organized the quiz for CIRSE 2006. We invite all of you to attend the session, which will take place on Tuesday, Sept. 12th from 12 o'clock until 1pm and witness the "battle of super heroes vs. bad guys".



*The riveting head-to-head competition was ultimately won by the American team*

## CIRSE Foundation Party Tuesday, September 12



*The stunning Villa Miani, designed in Victorian style, is surrounded by a beautiful garden from which you can see all the way to Vatican City.*

**CIRSE is proud to announce that CIRSE 2006 will feature another fund raising party in aid of the CIRSE Foundation.**

The backdrop for this year's event will be the stunning Villa Miani overlooking the city of Rome all the way to St. Peter's Cathedral.

An exquisite dinner and an outstanding entertainment programme will provide the perfect opportunity to celebrate the conclusion of our meeting. If you are interested in attending the Foundation Party, please visit our website ([www.cirse.org](http://www.cirse.org)) and go to CIRSE 2006 -> Social Events, where you will find a ticket order form.

## CIRSE Opening Ceremony and Concert Saturday, September 9



**Italian Orchestra Show**  
16:30, Aula Magna

CIRSE 2006 delegates are kindly invited to experience the all-time classics of Italian and international music performed by the BRAVO Orchestra. The concert is open to all congress attendees and accompanying.

## European School of Interventional Radiology

Interventional Radiology is one of the fastest-developing disciplines in medicine and major advances in computing and consequent substantial improvements in image processing are likely to further increase the role of IR in the future. Rapid 3D imaging is already enabling interventionists to access parts of the body previously difficult to reach and to treat a variety of diseases safely and effectively. The main obstacle to the growth of Interventional Radiology at present is the shortage of well-trained interventionists. This problem is most acute in less well-developed countries. However, it is substantial even in Western Europe and North America. One of the reasons is the historical position of this therapeutic discipline within the service specialty of diagnostic radiology. The development of training curricula for this clinical discipline within the wider specialty of radiology has been slow and unsatisfactory. There is a great need for this deficiency to be rectified and the ESIR aims to make a major contribution in this regard.

### The ESIR aims to:

- Promote Interventional Radiology in countries where it is not yet fully developed
- Expand the scope in countries where Interventional Radiology is already established
- Help to disseminate new techniques
- Contribute to the growth of the specialty by making local clinicians aware of what Interventional Radiology can offer them
- Contribute to the development of the specialty for the benefit of patients

### Vascular Interventions - Advanced Course

The first ESIR course, organised by the CIRSE Foundation, took place from June 16-17 in Kuopio, Finland. H. Manninen, Head of the Department of Clinical Radiology at the Kuopio University Hospital, hosted the successful course, whose scientific content had been put together by A. Nicholson.

CIRSE would like to thank H. Manninen and his team for their kind support and the wonderful social events.



*P.A. Gaines spoke about the treatment of aortic dissections.*



*The lectures*



*... were followed by a lively discussion*



*and an outstanding social programme.*

### Vascular Interventions - Basic Course

The second course on vascular interventions organised by the ESIR took place in Lublin, Poland from June 23-24. The two day basic course organised by M. Szczerbo-Trojanowska was attended by many Polish residents, but also attracted physicians from other countries. The outstanding lectures and state of the art facilities was only surpassed by the hospitality of the local hosts.

CIRSE would like to thank M. Szczerbo-Trojanowska and her team for their excellent organisational work and is looking forward to the next ESIR course in Poland.



*The second ESIR course*



*... organised by M. Szczerbo-Trojanowska*



*... included lectures given by various distinguished CIRSE Members*



*... as well as small study groups coached by the lecturers.*

## New Standards of Practice Guideline

**CIRSE takes a strong stand in the definition of guidelines for clinical practice. With the creation of evidence-based guidelines for interventional radiologists our Standards of Practice (SOP) Committee is contributing to the standardisation of practice for interventional procedures across Europe.**

The committee's latest guideline deals with gastro duodenal stent placement and can now be viewed by all members in the CIRSE Members Lounge at [www.cirse.org](http://www.cirse.org).

The following documents are now available on the CIRSE web site:

- Quality Improvement Guidelines for Percutaneous Inferior Vena Cava Filter Placement for the Prevention of Pulmonary Embolism
- Quality Improvement Guidelines for Percutaneous Transhepatic Cholangiography and Biliary Drainage
- Quality Improvement Guidelines for Stenting in Infringuinal Arterial Disease
- Quality Improvement Guidelines for Uterine Artery Embolisation for Symptomatic Leiomyomata
- Quality Improvement Guidelines for Percutaneous Nephrostomies
- Quality Improvement Guidelines for Placement of Oesophageal Stents
- Quality Improvement Guidelines for Percutaneous Vertebroplasty
- Quality Assurance Guidelines for Superior Vena Cava Stenting in Malignant Disease
- Quality Assurance Guidelines for the Endovascular treatment of Occlusive Lesions of the Subclavian and Innominate Arteries
- Quality Assurance Guidelines for the Performance of Carotid Stenting
- Quality Assurance Guidelines for Placement of Gastroduodenal Stents

## Good Clinical Research Awareness Programme at CIRSE 2006

### Saturday, September 9

#### Background of Good Clinical Practice

9.45 - 10.15

At the end of this course you will understand the impact of history on our current laws and guidelines, understand the development and current status of the laws and guidelines and have a basic understanding of the applicable guidelines.

### Saturday, September 9

#### EU Guidelines and responsibilities: ICH-GCP, ISO 14155, Data protection law(s), EMEA Inspections

11.30 - 12.00

At the end of this course you will understand how compliance with GCP ensures that clinical trials are scientifically sound, allowing accurate reporting, interpretation and verification. You will understand the importance of confidentiality and have a basic understanding of the possibilities and consequences of FDA and EMEA inspections.

The places for the courses will be given to attendees on a first come, first served basis. A certificate of attendance will be provided after the courses.

## Aly Talen: Speaker at the Good Clinical Research Awareness Programme

Mrs. Aly Talen, co-founder and Director of Clinical Research of Genae Associates, Belgium, will be the speaker at the CIRSE 2006 Good Clinical Research Awareness Programme. Having more than ten years of experience in the field of clinical research and being involved in many different aspects of clinical research projects, Mrs. Talen will be able

### Sunday, September 10

#### Investigator & sponsor responsibilities according to Good Clinical Practice

9.45 - 10.15

At the end of this course you will have a basic understanding of the investigator & sponsor responsibilities in clinical research projects related to documentation, products / devices as well as of the protection of the safety and well being of the involved patients.

### Monday, September 11

#### Good Clinical Practice - Common findings: documentation and reporting, informed consent process

9.45 - 10.15

At the end of this course you will recognize the importance of obtaining informed consent, understand the importance of documentation and reporting responsibilities and have a basic understanding of how inspectors / auditors will look for and document possible findings.

This program has been made possible by an educational grant from CORDIS, J&J.

to provide attendees with the knowledge of how good clinical practice compliance supports the scientific conduct of clinical trials. Furthermore Mrs. Talen will discuss common pitfalls and GCP deviations, which will enable you to avoid potential issues in your clinical research practice.

## Advertorial

## Absorbable Metal Stents (AMS): A Clinical Update

**Percutaneous coronary and peripheral vascular intervention procedures frequently include implantation of permanent metal stents in order to minimize the risk of vessel recoil after balloon dilatation. Despite the positive initial impact of stenting on the success rate of percutaneous interventions, the permanent metallic implants pose the risk of a continuous interaction between non-absorbable stent and surrounding tissue, leading to physical irritation, long-term endothelial dysfunction, or chronic inflammatory reactions.**

Absorbable stents are currently discussed as a means to combine a mid-term mechanical vessel support with the advantage of having no long-term presence of the implant. This removes a potential trigger for late restenosis. The chance of having a tool that supports the vessel wall after percutaneous intervention procedures, but still having a quasi-native vessel in the long-term perspective, seems to be attractive. With respect to a possible necessity of a bypass graft in the following years, the disappearance of implanted stents would be of great value.

The first clinical experience with the Absorbable Metal Stent (AMS) was performed in the treatment of below-the-knee lesions. Twenty patients (10 male, mean age 76 years) with chronic limb ischemia (CLI) and short, localized infrapopliteal disease were received an AMS between December 2003 and January 2004. The mean lesion length was 11mm (range: 2 - 20 mm) and the mean vessel diameter was 2,7mm (range: 2,5 - 3 mm) with a mean stenosis of 84% (range 75 - 95%). One patient presented with an ulcerated lesion ulceration, 3 with associated thrombi and 14 calcified stenoses were diagnosed. Prior to the infrapopliteal procedure, all inflow limiting lesions above the knee were treated. All lesions were first dilated and AMS implantation was only performed in case of suboptimal angiographic result after PTA (>30% residual stenosis, flow-limiting dissection or intimal flap). In 2 cases, a post dilatation was performed.

Procedural success was achieved in all 20 patients. A total of 23 Mg stents were implanted; in 3 patients 2 stents were implanted for longer or tandem lesions. The follow-up included blood analysis, clinical examination and duplex at discharge, 1, 3, 6, 12 and 24 months. Duplex and occasional MR-angiography controls were able to demonstrate the gradual absorption process. The 24 months follow-up (Kaplan-Mayer calculation) showed a primary patency rate of 73,3% and a limb salvage rate of 94,7%. This experience showed that in the FIM human BTK use AMS implantation resulted in safe procedures with a good 2-year patency and limb salvage rate. Moreover the AMS provided sufficient support and was absorbed producing almost no artefact on MR-imaging.

The next step in the clinical evaluation of AMS in the BTK indication is the prospective, randomized, international and multicenter AMS Insight I study, which is held in Europe and is currently finalizing patient inclusion. In this trial the effect of AMS implantation is compared to PTA in the treatment of Infrapopliteal lesion in CLI patients. 117 patients (Rutherford class 4 and 5) will be enrolled in 15 international centres. The study primary endpoints are the safety (1 month MACE rate) and efficacy (6 months patency rate) of the AMS compared to optimal PTA. The study is currently ongoing. Clinical and duplex follow-up will be performed at 1 day, 1, 6 and 12 months, with a control angiography planned at 6 months. Based on the same protocol, the US counterpart of this trial, AMS Insight II, will start enrolling patients in fall 2007. In total 200 patients will be enrolled in 20 clinical centers.

Beside the investigations performed in the peripheral indication, the AMS also has been evaluated for coronaries. Progress AMS was a prospective, multi-center, consecutive, non-randomized FIM (First In Man - coronary) study to evaluate the clinical feasibility of the Absorbable Metal Stent in the treatment of a single de novo lesion in a native coronary artery. The study included 63 patients at 8 international clinical sites. The FIM coronary study showed feasibility (High technical and procedural success), safety: no death, no MI, no stent thrombosis. The study met the primary endpoint (MACE <30%). Further improvement in stent design, coating and combination with drug are the focus of the present R&D efforts to further improve efficacy for coronary use. The Absorbable Metal Stent (AMS) technology platform is proven, MRI / CT compatible with confirmed absorption with IVUS during FU.

*Future AMS projects are the development of a balloon-expandable AMS for the treatment of peripheral stenosis in large vessels. Even more appealing is the perspective to combine the advantages of AMS with local drug eluting technology: this double approach can better address the overall patient clinical outcome as the local drug therapy may optimize the results obtained with the mechanical treatment (i.e. minimizing inflammation, reducing cells proliferation...).*

## Bioabsorbable Stents

by Johannes Lammer

**Bioabsorbable stents, one of the most recent developments in IR, are receiving ever increasing attention from specialists in the field, and deservedly so, as they show potential benefits vis-à-vis the conventional metal stents. For instance, bioabsorbable stents avoid vascular remodelling when it is needed after PTA. Nevertheless, the stent should be absorbed after three months.**

Two different kinds of stents have been developed so far; on one side there are those based on polymers (e.g. polylactic acid - PLA), one of which is being tested on coronary vessels in Japan by Dr. Igaki and Dr. Tamai. A disadvantage of this stent seems to be its limited radial expansion force.

The other kind of bioabsorbable stents, which is based on magnesium, has so far demonstrated better mechanical qualities. This type of stent is usually absorbed within 3 months and not visible on MRI scans. It is currently being tested in a coronary study as well as in a multicentre study on patients with critical ischemia or artery obstruction in the calf.

Although the testing phase of bioabsorbable stents has not yet been concluded, two thirds of the recruitment phase have been finished without major safety issues.

**Professor Johannes Lammer is head of the Department of Angiography and Interventional Radiology at the University Hospital Vienna, AKH. He introduced the procedure of implanting bioabsorbable stents in Austria in August 2005.**

## The Chairman's Choice – A Selection of Events for Junior Interventional Radiologists at CIRSE 2006

kindly provided by Michael Lee

### Saturday, September 9

#### Foundation Course 1 Biliary Intervention

12:00 – 13:00

1. What Information do I need before drainage?
2. Biliary Anatomy and Bismuth Staging.
3. Key points for success.
4. How to place a stent.
5. When nothing works.

### Sunday, September 10

#### Special Session 13 Intermittent Claudication I

1. Prevalence - risk factors in epidemiology.
2. History and clinical examination: what can be learned.
3. Interpretation of non-invasive imaging tests.
4. MRA versus CTA

#### Special Session 20 CIRSE Meets India

12:30 – 13:30

#### Workshops

##### 23.3 EVAR:

Lessons for Beginners

##### 23.5 Embolisation Materials:

what should I use and where.

### Monday, September 11

#### Special Session 27 Intermittent Claudication 11

8:30 – 9:45

1. Lifestyle adaptation and medical therapy are an effective form of treatment.
2. Balloon angioplasty: where does it fit.
3. Implications of TASC 11.
4. Does subintimal angioplasty have a role.

#### Session 29 – Interactive Case Session: Basic Vascular Diagnosis

10:15 - 11:30

#### Foundation Course 11 SFA Angioplasty

12:30 – 13:30

1. Antegrade Access.
2. Retrograde to antegrade access
3. Popliteal access.
4. Crossing the lesion and PTA.
5. When to stop or stent.

#### Workshops

17:00 – 18:00

#### Trauma Intervention: getting started

### Tuesday, September 12

#### Special Session 40 Intermittent Claudication 111

1. Stent versus PTA: what is the evidence.
2. Covered stents: has their time come.
3. Emerging Technologies.
4. What is the role of Fem Pop Bypass?

#### Session 45 – Film Interpretation Panel

12:00 – 13:00

#### Special Session 47 Morbidity and Mortality Conference

14:00 – 15:15

#### Workshops

15:15 – 16:45

##### Carotid Stenting:

getting started

##### Closure Device:

when, how and what device.

### Wednesday, September 13

#### Special Session 55 Radiation Protection for Interventional Radiologists

10:15 – 11:30

1. Doses to the eye in the IR Suit
2. Strategies to reduce doses in the IR Suit.
3. Flat Panel Digital Technology in Interventional Radiology.

#### Workshop

##### Basic Genitourinary Intervention

12:00 - 13:00

## Virtual Reality Hands-on Workshops

The Scientific Programme Committee of CIRSE 2006 cordially invites you to register for one of this year's VR Workshops. There will be two workshops on carotid stenting and one each on renal interventions and interventions in the lower limb.

*Instructors:*

*D. Gould, A. Watkinson, J.-P. Beregi, P. Gaines, L. Lönn, S. McDonald, A. Patel, F. Perona, D. Vorwerk*



*A. Patel, D. Kessel, S. Dawson, R. Ashleigh and D. Gould at last year's Virtual Reality Workshop*

The aim of the workshop is to provide mentored experience in the sequencing of procedure steps and the use of interventional instruments. A total of six simulators supplied by various simulator manufacturers will be available. Participants will be able to perform the sequences of the target procedure in a virtual environment. The workshop will also provide an understanding of the current possibilities and limitations of simulator technology in the target procedures.

During the 2 hour time slot, up to 18 participants will have the opportunity to experience computer-based simulation of a pre-selected topic/procedure. Further participants may attend as observers only. The session will start with a presentation by a CIRSE faculty member, followed by an introduction to the relevant simulator by a simulator technician. Each delegate will have 25 minutes of hands-on experience under the guidance of a CIRSE faculty member and a technician. Faculty members will stay throughout the course to give feedback and discuss the procedures with the delegates.

**Time Schedule:**

**Sunday, September 10**

**Carotid Stenting**  
Virtual Reality-HWS 1  
11:30 – 13:30

**Monday, September 11**

**Carotid Stenting**  
Virtual Reality-HWS 2  
10:00-12:00

**Tuesday, September 12**

**Renal Artery Intervention**  
Virtual Reality-HWS 3  
10:00-12:00

**Wednesday, September 13**

**Intervention in the Lower Limb**  
Virtual Reality-HWS 4  
10:00-12:00

The workshop will take place on four different dates in the "Simulator Gallery" which will be located on the right hand side of the exhibition hall close to the meeting rooms. Workshop participation is limited (max. 18 participants per workshop). Pre-registration is therefore required.

## Simulators at CIRSE 2006



**At CIRSE 2006 the highly successful Virtual Reality "Experience the Future" Hands-on Workshops, first introduced at CIRSE 2005 in Nice, will be revisited.**

Virtual Reality "Experience the procedure in today's simulators' sessions" will offer procedural experience in tandem with specialty-specific plenary sessions in the target procedure and once more raise the profile of simulation amongst interventional radiologists and other participants of the CIRSE Annual Conference.

CIRSE is delighted to have attracted the support of some of the most important and innovative simulator manufacturers. For the first time three major simulator manufacturers have agreed to make simulators available in one training venue.

CIRSE would like to thank Immersion, Mentice and Simbionix for their kind support.

## Rome, the Eternal City

Almost since its beginnings Rome has fascinated mankind unlike any other city. For millennia, visitors to la città eterna have been captivated by its gorgeous monuments, cultural delights and timeless beauty. Here are some of Rome's most beautiful sites which will make your days in Rome not only a professional, but also an incomparable cultural experience.



### The Colosseum

Originally known as the Flavian Amphitheatre, the Colosseum was built by Vespasian in AD 72. With a capacity of approximately 50,000 spectators it was the largest amphitheatre of antiquity.



### The Pantheon

Originally built as a temple to the seven deities of the seven planets, the Pantheon became a Christian church in the 7<sup>th</sup> century AD. It is one of the best preserved ancient monuments in Rome.



### The Roman Forum

was the central area for commerce, administration, justice, cult and socializing around which ancient Rome developed. It comprises the remains of numerous temples, basilicas and arches.



### The Sistine Chapel

The rectangular chapel designed by Baccio Pontelli and built in the late 1400s is most famous and for Michelangelo's frescoes.



### The Vatican

Although not technically part of Italy, no trip to Rome would be complete without a visit to the Vatican. The tiny sovereign state headed by the Pope boasts some of the world's most important architectural feats, including St. Peter's Basilica and the Sistine Chapel.



### St. Peter's Basilica

Built on top of the burial site of St. Peter the apostle, it is considered one of the holiest sites in Christianity. Its 5.7 acres of floor space provide enough room for more than 60,000 people. The cathedral's inside is decorated with innumerable masterpieces, such as Michelangelo's Pietà.



### Trevi Fountain

marks the end of the aqua virgo, one of Rome's ancient aqueducts. Nicolò Salvi's baroque masterpiece depicting Neptune and the taming of the waters and is an extremely popular meeting spot for tourists. Legend has it that those who throw a coin into the fountain will return to Rome one day.



### Castel Sant'Angelo

The cylindrical building overlooking the Tiber River was originally built as a mausoleum. Later it served as a castle and fortress for more than 1,000 years. Today it houses a museum and is considered one of Rome's most important medieval buildings.

## CIRSE 2006 Congress Posters



With Antonio Canova's "Pauline Bonaparte" CIRSE has chosen a classical image for this year's meeting as a tribute to Rome's ancient history and art that will meet with state-of-the-art technology at CIRSE's 2006 congress in Rome.



In addition, CIRSE has produced a second congress poster, depicting a scene from the Hollywood movie "The Gladiator" as an illustration of modern medicine fighting ever new threats. The limited edition poster has been a great success.

## The Dotter Interventional Institute

Ever since its foundation 16 years ago, the Dotter Interventional Institute's main goals have been excellence in interventional education and research and provision of the highest quality clinical interventional care to its patients. Today it is clear that it is more than accomplishing this mission.



C. Dotter:  
*the father of Interventional Radiology*

The dream of creating a place for interventional techniques to flourish began in 1986, when Dr. Rösch and Bill Cook met at a congress of the Western Angiographic and Interventional Society in Monterey and sought for ways to commemorate their late friend Charles Dotter. Finally, in 1990, the Dotter Interventional Institute was established by the Oregon State Board of Higher Education as an independent, free-standing division of the Oregon Health & Science University School of Medicine.

The institute was charged with developing a multidisciplinary programme in interventional therapy with emphasis on interventional education, research and patient care. The accomplishment of these ambitious goals was made possible by the outstanding work of its staff, comprising some of the great pioneers of Interventional Radiology, like Josef Rösch, Fred Keller, William Cook and Peter Kohler.

### Research

The Dotter Research Laboratory, which was founded in 1989, can be used by scientists from all clinical disciplines to research interventional techniques as well as by equipment manufacturers for pre-market testing of their products. Due to the generous donations of several companies, the Dotter research facilities currently comprise two angiographic laboratories and a GE-OEC 9600. The top floor of the beautifully located building, which used to be a campus fire station, houses the Charles Dotter Museum, a learning laboratory and an angiographic and interventional film library.

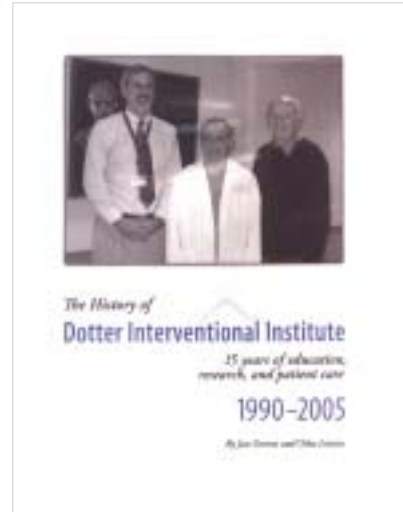
### Education

Radiology residency training in Vascular and Interventional Radiology at the Dotter Institute consists of a required four-month rotation, usually split into two-month blocks at OHSU and VAMC hospitals. During their fourth year, residents can choose an additional elective rotation. In 1999, this training was extended to include a one-month rotation for fellows in vascular surgery.

CIRSE wishes the Dotter Interventional Institute all the best for the future and hopes that it will continue its outstanding work in training medical personnel, informing the public about the availability and advantages of minimally invasive interventional therapy and improving clinical tools and techniques in Interventional Radiology.



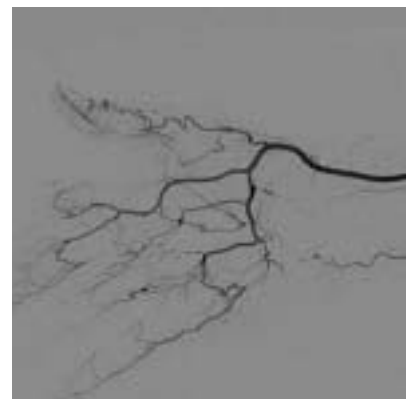
J. Rösch, W. Cook and F. Keller



**In celebration of its 15 years of education, research and patient care, the Dotter Interventional Institute has published a book about the institute's history and achievements.**

For more information about the Dotter Interventional Institute visit <http://www.ohsu.edu/dotter>

## What is your diagnosis?



A 42-year-old male with cold fingers. The condition started about 2 months ago and is steadily worsening.

What is your spot diagnosis?

**To find out the answer visit [www.cirse.org](http://www.cirse.org)**

## TACIT to compare three treatment strategies for asymptomatic carotid artery stenosis

**By now, practitioners of carotid stenting should have been alerted to a study that might finally provide a definitive answer regarding the best therapeutic approach to treating patients with asymptomatic high grade carotid artery stenosis: The Transatlantic Asymptomatic Carotid Intervention Trial.**

TACIT is a prospective, multidisciplinary, multi-center, collaborative U.S. and E.U., unblinded, three-arm, randomized trial. The trial will compare three treatment strategies in patients with duplex evidence of carotid stenosis: optimal targeted medical therapy alone (BMT); BMT with carotid stenting; and BMT with carotid endarterectomy.

The Society of Interventional Radiology (SIR) Foundation's Cooperative Alliance for Interventional Radiology Research (CAIRR) will serve as the clinical coordinating centre; the CIRSE Foundation will participate as a collaborating institution in the development and execution of the trial.

The U.S. Principal Investigator for TACIT is Barry Katzen of Baptist Cardiac & Vascular Institute Miami. The E.U. Principal Investigator is Matthew Thompson of Saint Georges Hospital, London. J.P. Mohr from Columbia University, New York, and Martin Brown from University College, London will serve as the study chairs.

Site selection is chaired by Kenneth Rosenfield from Massachusetts General Hospital Boston and Marc Sapoval from

Hôpital Européen Georges Pompidou Paris.

Site selection for TACIT initiated in May 2006. A minimum of 125-150 U.S. and E.U. investigators and study sites are currently being recruited; the target number of enrolments stands at 3700.

To apply as a site for TACIT, please complete the online form at:

<http://www.sirfoundation.org/misc/tacitpreapp.shtml>. In a second step you will be asked to fill out an online questionnaire and to deliver further documentation. All sites submitting this documentation will be considered for inclusion in the study. Final site selection will take place following review by the Site Selection Committee. Finalist sites will be contacted for further information and discussion.

### CIRSE 2006 Exhibitors

AB MedicaT  
Abbott Vascular Devices  
ALN Implants Chirurgiaux  
Angio Dynamics  
ArthroCare Europe AB  
Atrium Medical Corporation  
Barco  
Bard  
Baylis Medical  
BIBA Medical Limited  
Biosphere Medical  
BIOTRONIK  
Boston Scientific  
Bracco International  
Cardinal Health  
CeloNova BioSciences  
CIVCO Medical Solutions  
CORDIS  
Datascope  
Diomed  
Edizioni Minerva Medica  
Edwards Lifesciences  
EKOS Corporation  
Elastrat Sarl  
Endovascular Today  
Eucatech  
ev3 Europe  
GE Healthcare

GUIDANT Europe NV/SA  
H.S. Hospital Service  
IDev Technologies Inc.  
INNOMEDIC  
InterV / Pbn Medicals  
Invatec Srl  
Kensey Nash Europe  
Lombard Medical Technologies  
MDS Nordion  
MDT Medical Development & Technology  
MEDAX S.r.l.  
Medcomp  
MEDRAD Europe  
Medtronic International  
Mentice AB  
Merit Medical Systems  
Olympus Winter & Ibe  
OptiMed  
pfm AG  
POSSIS Medical, Inc.  
Radius Medical Technologies, Inc.  
RITA Medical Systems, Inc.  
Schering AG  
Symbionix Ltd.  
SIRTeX Medical Europe  
SORIN Biomedica Cardio Srl  
Spectranetics International B.V.  
Springer the Language of Science  
St. Jude Medical Coordination Centre,

Straub Medical AG  
Stryker S.A.  
Taewoong Medical Co. Ltd.  
Tecres Spa  
TeraRecon Inc.  
Terumo Europe  
Tyco Healthcare Holdings  
Vascular Solutions Inc.  
Vital Images  
W.L. GORE & Associates  
William Cook Europe  
Wisepress Ltd.  
Ziehm Imaging

*All information as per date of printing*

### Industry News

**Abbott has completed the acquisition of Guidant's vascular business, which, combined with Abbott's current vascular business, gives birth to one of the leading global vascular devices companies offering a broad line of leading coronary and endovascular products. The acquisition was made in connection with Boston Scientific's acquisition of Guidant Corporation.**

## CIRSE 2006 Abstract Submission

This year's abstract submission saw an all time high, resulting in a 30% increase in submitted abstracts compared to last year's meeting. In total, 866 abstracts in 20 different categories were submitted through the OASIS online submission system.

Notifications of acceptance or rejection were sent out on April 5.

We would like to express our thanks to all of those who made a contribution.

### Number of abstracts per topic:

Abdominal and GI Tract Intervention:	45
Aortic Stent Graft:	60
Bone and Soft Tissue Intervention:	43
Carotid Artery Imaging and Intervention:	37
Cardiac Imaging:	18
Central Nervous System Intervention:	9
Clinical Practice Development:	7
Embolotherapy:	95
Experimental Work in IR:	42
Genitourinary Intervention:	44
Haemodialysis Shunts and Venous Access:	41
Hepato-biliary Intervention:	45
Tumor Ablation:	40
Other Oncologic Intervention:	25
Peripheral PTA and Vascular Stents:	98
Renal Artery Intervention:	23
TIPS and Portal Vein Intervention:	35
Vascular Imaging and Diagnosis:	45
Venous Intervention:	51
Others:	63

Acknowledging the fact that sometimes the latest research can not be completed before the regular abstract submission deadline, CIRSE introduced a late breaking abstracts category this year, permitting the submission of abstracts on new experiments and clinical trials until May 15<sup>th</sup>.

Submissions in this category were accepted under the following conditions:

- The authors had to certify that the work was not complete and could not have been submitted at the time of the regular abstract deadline in February 2006.
- The abstract contains work that is original and has not been previously submitted to, presented at, or is under consideration for any other scientific meeting, including CIRSE 2006.
- The work is novel, evidence-based, and has scientific merit.

## Translation of CIRSE's Patient Information

Interventional Radiology is expanding continuously, developing ever new procedures and incorporating others from adjacent medical fields. Every day more patients can be treated by interventional radiologists. Unfortunately, many of these patients do not know about the advantages offered by interventional radiological procedures due to the lack of widely available information about our field. It is therefore crucial for the welfare of these patients as well as for the future of our discipline to better inform the public about the possibilities within Interventional Radiology.

Being aware of this necessity, CIRSE has included an extensive patient information section in its website. The continuously reviewed and extended articles cover medical conditions as well as the corresponding IR procedures.

In order to make this information available to a wider audience, the CIRSE Office is currently in the process of translating it into several other languages. If you would like to join forces with the CIRSE Office and our communications officer E.-P. Strecker and write new articles or translate the existing ones into your language, please contact the CIRSE Office at [info@cirse.org](mailto:info@cirse.org)

## EPOS™



**CIRSE Members are now able to view all accepted abstracts and awards from last year's meeting in Nice.**

By simply logging on to the CIRSE Members Area and selecting EPOS™, you are ready to browse or search all abstracts. As CIRSE is not the only society that implements this system, it is important to ensure that the CIRSE box is ticked before proceeding.

In this very straightforward system you can search all available data by title, author or keyword. All your results will be presented in a clear and orderly fashion.

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**EPOS™ has further developed CIRSE's role as education provider by facilitating the availability of relevant medical information. We hope that all members will take advantage of and benefit from this useful service.**

## CIRSE Meets India

The "CIRSE meets..." sessions were introduced at CIRSE 2005 with the aim of establishing and further developing relations between CIRSE and IR societies from overseas. After the success of last year's "CIRSE meets Korea", CIRSE will meet the Indian Society of Vascular and Interventional Radiology (ISVIR) at this year's congress. The ISVIR has put together an extraordinary session which will give an overview of the current status of its work in three especially chosen, regionally relevant disease states as well as its ongoing research. The Indian society's president and chairman of the session, S. Sharma, invites all congress participants to attend this meeting and gain an insight into Interventional Radiology in India.

### Sunday, September 10

12:30 - 13:30

#### **CIRSE Meets India**

Chairperson: S. Sharma

#### **ISVIR - Objectives, activities and current status**

A.K. Gupta

#### **Current concepts in the management of IVC and hepatic vein occlusion**

S. Punamiya

#### **Interventional Radiology in the management of tubercle induced hemoptysis**

M. Cherian

#### **Endovascular management of symptomatic lesions in nonspecific aortitis**

S. Sharma

#### **Current status of IR research in India**

J. Venkateshwarulu



*No strangers to the ISVIR: D. Vorwerk and J. Lammer chatting with M. Razavi*



*A.K. Gupta and S. Sharma chairing a session during an ISVIR meeting*



*S.B. Gaikwad, S. Sharma, S. Baijal and S.K. Puri*



*Prof. Maheshwari inaugurating the trade exhibition during an annual ISVIR conference also: S. Sharma and M. Rajani (front row), R.K. Goulatia and S.B. Gaikwad (back row)*

## Learning Centres at CIRSE 2006

The Learning Centres at CIRSE 2006 will provide an excellent opportunity to test interventional devices and gain hands-on experience with new equipment. The following companies will be present:

**Abbott Vascular Devices**  
**Boston Scientific**  
**Cook**  
**Cordis**  
**ev3**  
**Straub Medical**  
**Terumo**  
**W.L. Gore**

*All information as per date of printing*

**Satellite Symposia  
at CIRSE 2006**

**Saturday, September 9**

13.15-13.45

**Abbott**

Aula Magna  
Title t.b.a.

**Boston Scientific**

Room B  
Boston Scientific delivering what's next in radiofrequency ablation...  
How to select your patients for successful RFA in liver & lung  
*Speaker: T. de Baere, A. Denys*

**Lombard**

Room F  
Title t.b.a.  
*Speaker t.b.a*

**Sunday, September 10**

11.45-12.45

**Terumo**

Aula Magna  
Challenges in renal stenting  
How to recruit patients  
*Speaker: M. Downes*  
ODORI Registry preliminary results  
*Speaker: H.T. Abada*

**Boston Scientific**

Room B  
Boston Scientific delivering what's next in lower limb therapies...  
Score and Chill: New technologies for diabetic foot  
*Speaker: T. McNamara*

**GE, Siemens, Toshiba**

Room F  
Latest trends for peripheral CTA  
Pre and post endovascular intervention: early experience on new post-processing tools  
*Speakers: A. Azarine, A. Redheuil*  
Title: New insights in cardiac CT-DSCT  
*Speaker: C. Becker*  
Advanced volumetric CT - Today and tomorrow  
*Speaker: L. Bouwman*

13.45-14.15

**Biosphère Medical**

Room F  
Drug Delivery HepaSphere: clinical experience in the treatment of liver tumors  
*Speaker Technical Aspects: M. Grosso, Clinical Aspects: C. Massasaluzzo*

**Cook**

Aula Magna  
Peripheral destinations: The future of drug eluting stents in the legs and renals  
The use of drug eluting stents in the SFA in general

Renal stenting and potential for drug eluting stents in the renal artery  
Different drugs to stents, behaviour and the uses of polymer and why not  
Stents on drugs in different places

**Cordis**

Room B  
New developments in carotid stenting  
Growing evidence for carotid stenting  
The CASES carotid training programme

**Monday, September 11**

11.45-12.15

**Bayer Healthcare**

Room F  
Advances in thrombolytic therapy: a focus on alteplase  
Alteplase: a recombinant direct-acting fibrinolytic  
*Speaker: S. Deitcher*  
NAPA: novel arterial perfusion with alteplase, a multicentre phase II study  
*Speaker: t.b.a.*

**Boston Scientific**

Room B  
Boston Scientific delivering what's next in uterine fibroid embolisation...  
Predictors of clinical success in UFE: Why complete fibroid infarction is key and how to achieve it  
*Speaker: T.J. Kroencke*

**Terumo and Biocompatibles**

Aula Magna  
Interventional oncology - drug eluting beads, the future  
Combined precision TACE and RF ablation in hepatocellular carcinoma treatment  
*Speaker: R. Lencioni*  
Treatment of lung and colon liver metastases with drug eluting beads  
*Speaker: T. Vogl*

13.45-14.15

**Edward Lifesciences**

Room B  
New updates of the SFA treatment. The RESILIENT trial & the Edwards Lifestent Endovascular treatments in the SFA & critical limb ischemia: what do we know?  
*Speaker: J. van den Berg*

Update on the RESILIENT trial: 12 month data and quality of life measures, what do those new treatment options bring to the patient?  
*Speaker: B.T. Katzen*

**GE Medical**

Room F  
An international multidisciplinary approach to formulating strategies for preventing CIN  
CIN Consensus Statements: Practical guidance in managing the at risk patient  
*Speaker: C. Becker*  
**W.L. Gore & Ass.**  
Aula Magna  
Title t.b.a.  
*Speakers t.b.a.*

**Tuesday, September 12**

13.15-13.45

**Boston Scientific**

Aula Magna  
Boston Scientific delivering what's next in carotid artery stenting...  
How do stent and embolic protection designs influence clinical outcomes in carotid artery stenting?  
*Speaker: M. Bosiers*

**Bracco/Schering/Guerbet**

Room B  
Focus on contrast-induced nephropathy  
Selection and use of contrast media in patients at risk for CIN  
*Speaker: H.S. Thomsen*  
Recommendations for prevention of CIN and management of patients at risk  
*Speaker: B. Barrett*

**Cordis**

Room F  
Evidence in Lower Limbs  
Stenting in SFA, were we too FAST  
Cypher in BTK, encouraging preliminary results

## CIRSE welcomes the new applicants for membership

### Junior Membership

Rabitsch, Egon, AT  
Cassagnes, Lucie, FR  
Eken, Volkan, TR  
Fidanis, Theodoros, GR  
Figueira, Tomás, PT  
Kakiouris, Tommas, GR  
Kostaras, Vasileios, GR  
McGrane, Siobhan, IL  
Owonibi, Patrick, NG  
Reiter, Markus, AT  
Schaefer, Jost Philipp, DE  
Srivastava, Manoj, GB  
Wild, Johannes, CH  
Zibilidis, Giorgos, GR

### Corresponding Junior Membership

Ho, John, US  
Opazo Verdugo, Javier  
Antonio, CL  
Ricardo Augusto, Pinto, BR  
Sohrabi, Bahram, IR

### Membership

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Chircop, Régis, FR  
Kurdziel, Jean-Claude, FR  
Moulin, Guy, FR  
Eichinger, Sebastian, DE  
Krüger, Karsten, DE  
Meyer, Dirk-Roelfs, DE  
Neuerburg, Joerg, DE

Ragg, Johann Christof, DE  
Petropoulos, Dimitris, GR  
Browne, Ronan, IL  
Cioni, Dania, IT  
Coimbra, Élia, PT  
Vilares Morgado, Paulo, PT  
Dorobat, Bogdan Cristian, RO  
Denys, Alban, CH  
Terraz, Sylvain, CH  
Wells, Richard, GB

### Corresponding Membership

Albakri, Rami, JO  
Barboza, Ricardo, US  
Burhan, Essam, SA  
Dorio, Paul, US  
Englund, Raymond, AU

Foster, John, US  
Gupta, Sanjay, US  
Hassan, Wadie, BH  
Horton, Keith, US  
Hsu, Connie, US  
Joh, Joon Hee, KR  
Nitta, Norihisa, JP  
Schemmer, Drew, CAN  
Takeuchi, Yoshito, JP  
Varma, Jay, US  
Walker, Duncan, AU

### Corporate Membership

Cardinal Health, US

### Corresponding Fellows

Kaufman, John A., US

## CIRSE welcomes the new members

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Akmangit Ilkay, TR  
Arun Sebastian, UK  
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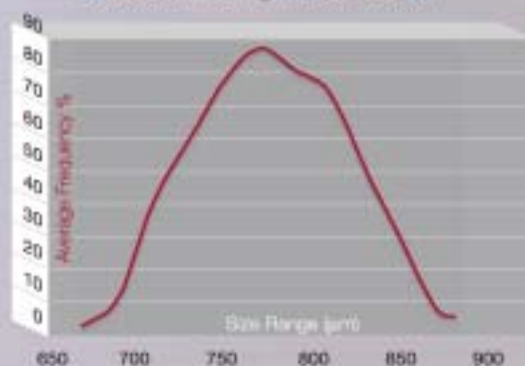


THE calibrated chemoembolic for targeted and safe delivery of chemotherapy

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A Narrow Distribution of Calibrated Beads

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Hydrated Beads

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Bulk (non-bound) water

Loaded Beads

Interaction of doxorubicin with SO<sub>3</sub><sup>-</sup> groups displaces water from the hydration shells



Before Delivery



DC Bead 500-700µm loaded with 25mg/ml doxorubicin before and after delivery through a 2.7F microcatheter.\*

After Delivery



**Hold the date at CIRSE 2006:**

Monday 11 September, 11.45am-12.15pm, Palazzo dei Congressi

Interventional Oncology – Drug Eluting Beads: The Future

Chair: Prof. J. Lammer, Austria. Speakers: Prof. R. Lencioni, Italy; Prof T. Vogl, Germany

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 1. Vanka, M., Reed, M., et al. Poster presentation. AAGLD 2002.  
 2. Foxon, R. Presentation at CIRSE 2004.  
 3. Usher, J.M., Reed, M.I., Montagna, K, et al. Lancet 2002; 358:1734-1736.  
 4. Data on file. Biocompatibles UK Ltd.

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