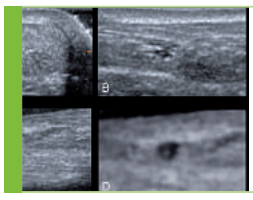
www.gehealthcare.com

ultrasound post

technical development and medical research –
NEWS and FACTS.

2006 / 4th edition **No. 15**



Ultrasound
The Rising Hope for Rheumatology 3

LOGIQ P5
Powerful Streamlined Ultrasound System 3

Lunar Densitometer:
Advantage in Sports Medicine 4

Discussion at the ISUOG Meeting in London with Renowned Specialists in Prenatal Ultrasound

New Transvaginal Probe: "We Will Have to Rewrite the Books"

ULTRASOUND POST:
The lunchtime symposium was buzzing over this new transducer - is it really different?

Dr. G. DEVORE:
Absolutely. I saw the probe (transvaginal transducer) in its early stages of development and when I used it for the very first time I almost fell off of my chair. I could not believe it. It was so dramatic in as far as the change in the anatomy we were seeing; it was a momentous occasion in ultrasound history. I have been around longer than most and from the very beginning I saw that this was one of those defining moments where ultrasound comes along and something really big happens and you say to yourself, I will never forget this – it was electrifying. There have probably been only two or three occasions in my career where I felt like that.

Prof. Dr. R. CHAOUI:
For me it is like sitting in your car when there are raindrops on the windshield. You can see big things like buildings that you have seen everyday and you make little drawings and you recognize everything. But if you wipe away the raindrops, everything becomes so clear and sharp – it is as if the sun came out again and you begin to see detail you have never seen before. With the new probe we are seeing meaningful detail in the 11-week-old fetus, even though it is no longer than your finger.

Pictured at the recent International Society of Ultrasound in Obstetrics and Gynecology meeting in London with the new GE Healthcare VOLUSON E8 ultrasound system are (from left): Associate Professor of Reproductive Medicine and Surgery at the University of Nottingham, Dr. Nicholas RAINE-FENNING, Prof. Dr. med. Rabih CHAOUI of the Private Centre for Prenatal Diagnosis and Human Genetics in Berlin, GE Healthcare's Vice President/General Manager Ultrasound and PCD Heinz GLOOR and Dr. Greg DEVORE, an expert in fetal ultrasound and full-time consultant to community-based obstetricians in the USA, with over 100,000 ultrasound exams to his credit.

Dr. G. DEVORE:
To me it is like a pair of glasses – and an old guy like me relies on glasses. If you take your glasses off and try to read, everything is blurry. But when you put them back on, you say, "Wow! I can see clearly again!"

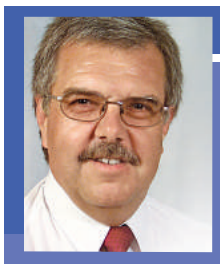
Dr. N. RAINE-FENNING:
The detail is startling, so much so that experienced sonographers in my department are seeing anatomy they have never seen before. We are going to have to rewrite the books!

ULTRASOUND POST:
How does this new detail help the patient?

Dr. G. DEVORE:
It helps the patient in two ways. First, their natural fears about the fetus' health can be calmed much earlier on – 12 weeks compared to 22, so they are more relaxed much sooner, and second, if there is a problem, we spot it earlier and can advise on suitable action.

Prof. Dr. R. CHAOUI:
In my lecture at the lunchtime symposium I presented two cases.
I showed the case of a severe brain anomaly which I suspected at 8 weeks but was forced to wait another 4 weeks in order to prove the typical appearance that we are familiar with - and this additional wait is a typical decision.
A similar case I saw today was a fetus in which I saw no kidneys. Generally fetuses without kidneys have no amniotic fluid but that was not the case with this fetus - why? I told the patient, just because we have amniotic fluid at 12 weeks, doesn't mean we can be sure that everything is normal; indeed, everything is not normal. If the kidneys are absent then a few weeks from now the fluid will disappear.
This advice prepared them for bad news so that when they came back and I was unable to find fluid, they could make an appointment to stop the pregnancy. Seeing things earlier is very important. I want to high-

EDITORIAL:



Heinz GLOOR
Vice President / General Manager
GE Healthcare Technologies
Ultrasound & PCD
Europe, Middle East & Africa

Dear Reader,

After a year marked by tremendous technological breakthroughs in ultrasound both in the area of research at the forefront of today's high-tech medical science as well as in the effort to make high-end diagnostic tools available to every practitioner, the question arose as to what the future directions in ultrasound development will be – a question that is currently discussed at almost every medical symposium where ultrasound is a relevant topic.
For us as a developer and supplier the answer is already visible in our new product introductions for 2006. This year GE Healthcare Ultrasound introduced several new systems packed with various new features from intuitive user interfaces to imaging and diagnostic tools for more diagnostic confidence. With our Compact Ultrasound product line we laid the groundwork for a completely new approach for more flexibility inside and outside the ultrasound lab while maintaining high imaging standards. This will have an impact on all areas of medicine that utilize ultrasound. In Women's Health the VOLUSON E8 system was introduced. It is a premium class device with automated Volume Ultrasound functionality and incredible 2D image quality that makes very early pregnancy diagnosis (7/8 weeks) possible for the first time in ultrasound history and has already sparked very positive and interesting discussions within the medical community (read more inside this edition). For General Imaging in Radiology, Echocardiography and OB/ Gyn we completed and launched our lightweight Compact Ultrasound line which was initiated several years ago with VIVID *i* and culminated in the LOGIQ *e*, VIVID *e*, VOLUSON *i* and VOLUSON *e* series this year. This is a whole new range of products with high-end image quality and superior flexibility, dedicated to all medical applications, from those still considered traditional to the newest applications such as Anesthesiology, Local Anesthesia, Emergency and Rheumatology. In addition, for private practices and specialized clinics we introduced LOGIQ P5, a system loaded with breakthrough technology in a smaller and more streamlined package.
However, in order to increase the quality of healthcare, developing new technologies alone is not sufficient; for us it is also of the utmost importance that all users become familiar with these new features and possibilities. For this reason GE offers a continuously growing number of educational programs, half of which are composed of lectures from worldwide renowned specialists in their fields and the other half of which are hands-on sessions. There is no end in sight for the further improvement of ultrasound and we have many promising innovations in our product pipeline that I look forward to sharing with you in the coming years. For us, "the journey is the reward"!

Yours sincerely

light three situations I experience every day of my life when I attend to patients at 12 weeks compared with the ones I see at 22 weeks.
At 12 weeks there is still a kind of secrecy – only a few people know about the pregnancy – neighbors and colleagues at work usually are not told. For example, I recently saw a woman who regularly appears on television and she said, "Before I tell everyone I am pregnant I would like to see if everything is okay". She saw that the heart was normal and the head was normal; in fact everything was normal so she was happy to talk about it. The point is if you are 41 and there is something wrong why should everyone know that you are pregnant? And if there is a problem and the patient has to terminate the pregnancy, then secrecy is important.
The second point is that women sometimes have great difficulties in making decisions in the second trimester when they feel the fetus inside them. If I find an abnormality before this, at 12 weeks, the patient does not have the emotional attachment to the pregnancy and so it may be easier to make the decision to terminate. At 22 weeks they have seen the fetus 5 or 6 times, it is moving and they cannot decide, even in cases of severe abnormalities, to terminate and may wait until birth when the baby will often die.
My last point is that by doing early ultrasound, we can detect types of chromosomal abnormalities which are not a high risk. Also, because we learn so much more about problems, we are ready with treatment in the next pregnancy.

Dr. N. RAINE-FENNING:
For my in-vitro fertilization (IVF) patients, the power of the probe means I can be definitive. They say the thought of having cancer is worse than actually having it. This is the same with women wanting to have children who need IVF for that.
Knowing they are suitable for the treatment, or if not, knowing why, perhaps due to the onset of the menopause, causes grief, but at least they are informed and can make knowledge-based plans to lead their life.

ULTRASOUND POST:
It's not all bad news though?

Dr. G. DEVORE:
That's very true. I spoke earlier about patients getting their fears laid to rest 10 weeks earlier than usual. Another thing along that line which is very important when you see things happen is that you identify there is something wrong early on in the pregnancy and the fetus has died. So often I have patients come in who have a dead fetus at 13 or 14 weeks and they automatically believe they have done something wrong, that they did something they shouldn't have or that they ate something they shouldn't have, whatever.
They feel tremendous guilt about why their baby died. Now we have the ability to reassure them it was not their fault and these things can just happen.

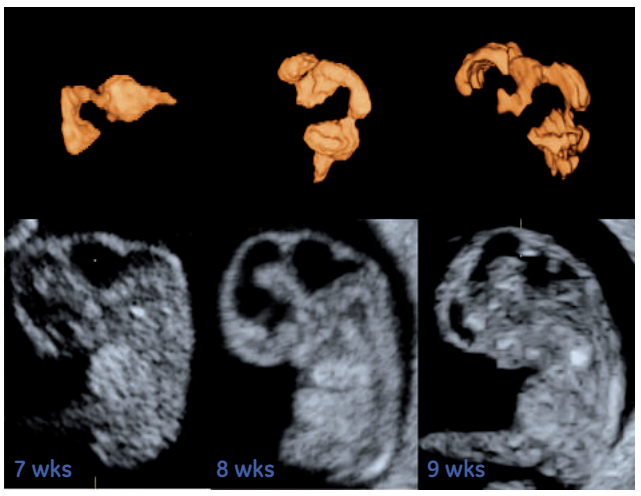
Dr. N. RAINE-FENNING:
By using this new probe, the clinician is empowering the patient by making a confident diagnosis and making it earlier - then they decide what to do.
I think the key is most patients have normal findings, so they receive this huge reassurance. But if there is an abnormality then at least the patient is informed.

Let your eyes decide what the new transvaginal probe is able to visualize at GA 11 and GA 13.

ULTRASOUND POST:
You are the pioneers in the use of this new transducer, what advice can you give new users?

Dr. N. RAINE-FENNING:
We now have a new tool and we can make diagnoses much earlier, but we have to observe what is happening. Perhaps the hardest lesson is that unless you can see something that is obviously abnormal, you have just got to observe and rescan and learn more. Then when you start to realize you can diagnose absent kidneys, you can be confident in your advice to the patient.
Another area I would focus on is education. We spoke about that with Omar Ishrak and it is a very important issue.
However, at the moment, a typical course is not long enough to effectively train people.
People now need much more support and there are not enough people to provide this support, so there needs to be some library for data that can be scanned because there are simply not enough resources to go around.

Dr. G. DEVORE:
Education is key. This is because very early exams could lead to misinterpretation of scans. For example, if the exam shows a serious heart defect, the patient may decide to terminate the pregnancy in the belief that the fetus has no chance. In reality this may be a normal physiological response to early pregnancy.
So one of the things that has to happen with this new technology is that the people who are using it, luminaries and those of us in this room and other people who are involved in the early implementation must either publish, state or teach their findings or produce white papers that indicate this is what we see - it is not a structural malformation or an abnormality, so don't respond accordingly. It has to be out on the table because otherwise, people will make mistakes.
We really have to bring ourselves up to speed. The educational part of this is so crucial, so you look at what GE has to do. They need to take it in hand and they have to make things available to educate people.



Steps of fetal brain development at GA 7, 8 and 9

ULTRASOUND POST:
Do you have a summary on the new technology?

Dr. G. DEVORE:
You know there are two points. The first one is what we are doing now at 12 weeks actually is similar to what was done at the beginning of the 80's when ultrasound was performed at 22 to 25 weeks. Back then they saw things and compared what they had seen to what they saw after birth. And so in the last 20 years we have been able to discover things like cardiac anomalies present in cases where findings are otherwise neutral or we have come to know that there are some diseases where we can witness the normal brain MUMBLE destruction, whereas at birth we only see the end result.
We now experience the same results much earlier because we can see anomalies at 12 weeks and compare these results to what we would generally see at 22 weeks. To be honest, the difference is that we were seeing these things before, but now, with this resolution, we see more detail and I think this should be available for every sonographer. Whereas in the past you would need a very high level of skill and very good conditions, now it could be commonplace.
With this new high resolution probe comes the ability to provide 3D and 4D information, which means you can store volumes and work on the volumes and demonstrate things in new ways which were not possible before. This is making diagnosis more and more robust.

Dr. N. RAINE-FENNING:
I agree, and 3D has a huge educational potential. It is the ideal media for training in ultrasound because you can store this data and you can look at it in many ways. To me the new technology rewrites the book and, like Greg, I feel that the entire ultrasound imaging community needs to be educated about its power.

ULTRASOUND POST:
You must have had a great time during the trial period?

Dr. G. DEVORE:
It's been marvelous – this is the gold standard.

Prof. Dr. R. CHAOUI:
This is true.

Dr. N. RAINE-FENNING
This technology will change the ultrasound world.

GE Healthcare Ultrasound Europe Enters the Field of Ultrasound Guided Anesthesia

MONACO. With GE's Compact Ultrasound unit LOGIQ *e*, which was especially developed and clinically evaluated for regional anesthesia guidance, we are able to offer a comprehensive solution to our existing customers in the area of ultrasound guided nerve blocking applications. According to Dr Luc Mercadal from the Centre Hospital Claude Galien in Quincy Sous Senart, France, who works on a LOGIQ *e* ultrasound system, ultrasound guided nerve blocking applications are absolutely new in this special field: **"For the very first time we can follow the entire procedure on the screen, from the needle puncture through the anesthetic injection until the end of the procedure."** Before, physicians used a technique called neurostimulation, a "half-blind" procedure to isolate the area of interest.
Now, thanks to the continuously improving performance of GE's Compact Ultrasound solutions and their relatively short learning curve, ultrasound guided procedures are now being performed more and more throughout Europe. Dr. Luc Mercadal thinks that it will expand its role and will be adopted by a large number of colleagues. Mercadal's department will provide their feedback to GE in order to further improve the performance of ultrasound in this field. Consequently, ultrasound guided regional anesthesia represents our future area of opportunity for growth. And this presents a challenge for GE's educational programs like the International Academy of Medical Ultrasound. Luc Mercadal knows the importance of education in ultrasound guided anesthesia, because he himself had to learn everything regarding this modality starting from the basics. **"There are very few books related to our application with ultrasound, you have to understand that we are really at the beginning."**
The International Academy of Medical Ultrasound is accepting this challenge and will be offering special ultrasound guided anesthesia courses throughout Europe starting from 2007. These courses will be divided up into theoretical lectures and practical hands-on sessions on LOGIQ *e* Compact Ultrasound units. All ultrasound units are equipped with GE's unique CrossXBeam imaging modality and 12L high-frequency probes. The date of all courses will be published in the next issue of the Ultrasound Post.

LOGIQ 9 – The Rising Hope for Rheumatology

ANCONA, Italy. Prof. Walter Grassi, well recognized specialist in this field, member of EULAR, the European League Against Rheumatism, and author of many publications is one of the first who discovered the tremendous developments of ultrasound technology in musculoskeletal medicine on the system LOGIQ 9. Prof. Grassi emphasizes the advantages of this revolutionary new approach to ultrasound, which, because of its acquisition method, is limiting the operator dependence. Ultrasound Post had the chance to talk to Prof. Grassi about his latest findings.

ULTRASOUND POST:
What are the general advantages of ultrasound, why should rheumatologists utilize ultrasound in their daily routine?

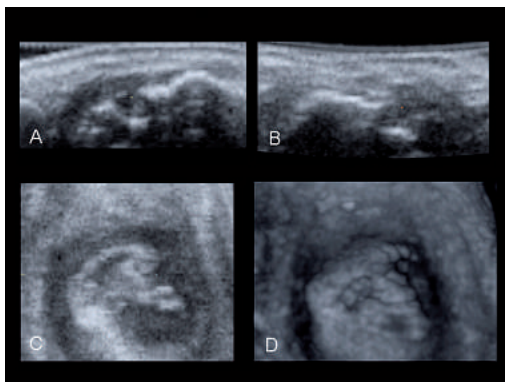
Prof. GRASSI:
Sonography is a non-invasive, inexpensive and radiation-hazard-free imaging technique providing quick and useful information for the management of rheumatic diseases. The main indications of sonography in rheumatology include the evaluation of patients with regional pain syndromes and chronic arthritis, short-term therapy monitoring and guidance for invasive procedures. Sonography also has the advantage that it will continuously improve the operator's understanding of regional and functional anatomy and pathological processes leading to improved clinical examination skills. While the formal evidence required to support the cost-effectiveness of sonography in rheumatology is currently lacking, it is likely that improved diagnostic and interventional skills will lead to better patient care and clinical results.

ULTRASOUND POST:
The acquisition of volume data sets is much different from the acquisition of 2D ultrasound. Can you compare these two methods and describe the advantages of Volume Ultrasound?

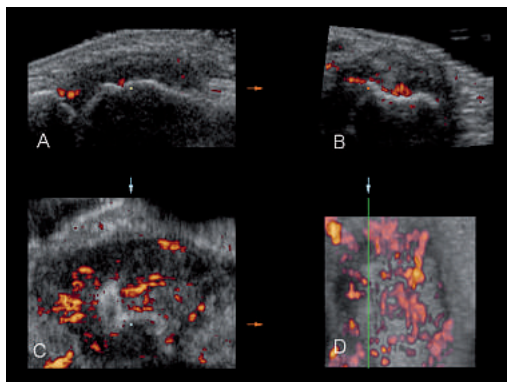
Prof. GRASSI:
The specific characteristics of acquisition and reconstruction of the images make Volume Ultrasound the ideal tool to consider as the potential 'conclusive solution' to the main problems which limit the diffusion and reliability of traditional sonography. The challenge for Volume Ultrasound lies in proving itself to be a method that requires no particular skills, can be mastered in just a few minutes and is not operator-dependant.
The Volume Ultrasound acquisition process is based on large footprint probes that cover a relatively wide anatomical area and must not be moved on the skin surface to take the cubes of echoes. The acquisition is performed by an automatic movement of the beam that is not operator-dependant.
This kind of technique would seem to provide the best guarantee to limit any influence by the operator on the quality of the images.
In practical terms, the operator must select the area, put a layer of acoustic gel on the skin, put the probe surface on the gel layer, preferably avoiding any contact with skin, press the acquisition button, wait three seconds, and then move to another area. The volumetric echoes stored are available for further off-site examination on longitudinal, transverse, coronal and 3D reconstructions.

ULTRASOUND POST:
When you draw a conclusion of contemporary ultrasound, what is your estimation of the prospects for ultrasound in your special field?

Prof. GRASSI:
Volume Ultrasound may have the power to overcome the problems that interfere with the diffusion of ultrasound in rheumatology. Due to the specific characteristics of this technique, in the near future it will become a more attractive imaging modality when compared with other techniques such as magnetic resonance imaging. For some rheumatologists 2D sonography may remain the sonographic modality of choice in the shorter term principally due to cost issues.
However, once the practical benefits of Volume Ultrasound are widely known we predict that this technique will prevail. The 2D alternative to this innovative and attractive approach to sonography is a more complex, time-consuming and involved process. This shift in the balance between image acquisition and image interpretation will appeal to many. With conventional 2D sonography considerable effort is made both in image acquisition and interpretation during the scanning process. Akin to x-ray, Volume Ultrasound does not require the reader to be actively involved in the acquisition process and the main input from the clinician is in the image interpretation process. This aspect could represent a cornerstone for the future of ultrasound in rheumatology.



**Rheumatoid arthritis (Volume Ultrasound).
A - Longitudinal section of a metacarpal head showing a bone erosion. B, C, D – Corresponding transverse, coronal and 3D views showing further details of the erosive process.**



**Rheumatoid arthritis (Volume Ultrasound).
Soft tissue perfusion of the metacarpal joint assessed by conventional longitudinal (A) and transverse (B) sections. The patchy distribution of synovial perfusion can be carefully depicted by coronal (C) and 3D views.**

Loaded – LOGIQ P5. A Powerful New Streamlined Ultrasound System

CHICAGO, USA. GE Healthcare has introduced a new ultrasound system designed to deliver the performance advantage of breakthrough technology in a smaller and streamlined package. The LOGIQ P5 provides the same exceptional image quality, productivity capabilities and reliability of GE's industry-leading LOGIQ systems. Its premium performance makes the LOGIQ P5 ideal for portable radiology department applications as well as private practices and specialized clinics. The system includes advanced image quality features that have helped establish GE's flagship LOGIQ technology as the system of choice:

- GE's patented High Definition Speckle Reduction Imaging (HD-SRI) feature, which heightens visibility of organs and lesions with improved, high-definition contrast resolution that suppresses speckle artifact while maintaining true tissue architecture.

- CrossXBeam spatial compounding, which enhances tissue and border differentiation with an exclusive spatial compounding acquisition and processing technique.

- 4-D Imaging, which acquires three-dimensional images in real time to reveal the anatomical details with stunning image clarity.

"LOGIQ P5 brings everything clinicians love about the LOGIQ systems into a smaller package," said Terri Bresenham, Vice President and General Manager of GE Healthcare's Global Diagnostic Ultrasound business.
"GE Healthcare has re-imagined ultrasound by offering LOGIQ P5 and its advanced technologies to a broader audience, such as private practices, specialized clinics and community hospitals."
LOGIQ P5 is built on the industry's most advanced and proven system architecture, TruScan. This technology allows LOGIQ P5 to store raw data early in the imaging chain, which provides powerful post-processing and analysis. With access to raw image data, clinicians are able to compensate for variations in image acquisition to increase their diagnostic confidence, while reducing the number of patient rescans.

The LOGIQ P5 also addresses sonographers' high rates of stress-related injuries. At half the weight and size of most console-based systems, LOGIQ P5 is easy to maneuver in the tightest exam rooms.
The new system was designed with GE's exclusive SonoErgonimcs™ design, which includes functions such as a full-sized keyboard, hot keys and user-defined keys.

With GE's LOGIQ P5 system, clinicians can add the latest, most advanced features available – including Volume Ultrasound. "Our annual technology breakthrough strategy allows LOGIQ P5 customers to stay at the forefront in ultrasound and patient care. And that makes the LOGIQ P5 system a smart technology investment for today – and for the future," said Bresenham.

Exclusive Interview with Stefaan Poriau (MD) and Christophe Maes (Drs) of MCSBR:

High-end Lunar Densitometer in Mobile Unit for Sports Follow-up Attracts Huge Attention in Belgium

2001 the Medical Centre for Sports, Business and Related Research (MCSBR) has been founded to develop the study of the performance and wellbeing of both professional athletes non-competitive sport enthusiasts. Starting today, 26 October 2006 Stefaan Poriau (MD) and Christophe Maes (Drs.) and their team monitor athletes wherever they are with the help of the mobile Mensana Sports Talent Coaching unit, equipped with GE Healthcare's Lunar iDXA™ for body composition and LOGIQ Book for high performance Compact Ultrasound among other features.

Dr. Poriau and Drs. Maes, why is it important to measure the body composition in athletes?

For every type of sport there is an optimal body composition status. By following up on the tissue distribution and composition of the body, we can help our athletes to achieve and keep peak performance, while supervising nutrition regimens and training programs.

Why did you choose Lunar iDXA™?

With the Mensana Sports Talent Coaching truck, we want to underline our position as the leading centre for the medical follow-up and research of sport in Belgium. As you know, leaders won't settle for anything less than the best equipment on the market.

Lunar iDXA™ gives us what we need: Diagnostic excellence in measuring and monitoring the body composition of our athletes. In addition, we know from our experience (the hospital owns a Lunar Prodigy Pro™ for seamless osteoporosis management and body composition applications), that partnering with GE Healthcare means acquiring top equipment, and also a close and solid relationship.

Could you describe how the athletic body composition assessment will be executed in your practice?

In a first examination, we will measure the exact mass and distribution of each tissue compartment (fat, lean tissue, and bone) in the total body, and in more specific regions of interest. It speaks for itself that, for example among our professional cyclist population, we might have to pay special attention to the musculature in the legs and the fat distribution in the upper body region.

After a thorough analysis of the measurement values and statistical crosscheck with the sports profile, a baseline can be set in dialogue with the athlete and his nutritionist and coach. In the following examinations, the training and treatment effects can be monitored - and adjusted if necessary - with utmost confidence.

We also count on providing sustainable comeback training programs to the injured – for example think of the cycling world where falling (or collision) at high speeds is - unfortunately - not uncommon.

The mobile Mensana Sports Talent Coaching unit in operation mode

You mention professional cycling as one of your work areas. What projects are you currently working on?

We started with monitoring in professional cycling back in 2001 with the Davitamon-Lotto team. Soon other teams came along, but not limited to cycling. With our mobile unit, as in our hospital, we want to pay special attention to professional and amateur youth sports, veteran sports, and overall employee/population body health.

Furthermore we plan to report our findings to the scientific society and the larger public, because the health of so many is at stake – for example obesity epidemics - ... and the magic potion to fix this, could be as simple as "safe sports"...

That is a very noble goal! How would you bring this into practice?

We believe that all people feel and perform better when in a healthy body: "Mensana, in corpore sano". As such, we are firmly committed to the public health to create awareness and to provide the possibilities to act. One must not forget that the foundation of the MCSBR lies within the revalidation center of the Elisabeth Hospital. What we offer is professional supervision, including a full medical follow-up, diet regimens and training advice, for both active and non-active subjects. In fact, we can already reflect on a great deal of experience here: We helped 40 non-competitive cyclists climb Mont Ventoux in France, successfully treated obesity patients in their struggle for a healthy body, helped quickly prepare 40 inexperienced persons for a marathon with a 6-month optimization program, and successfully reduced absenteeism among government personal with a dedicated work-out program.

You also mentioned having an ultrasound LOGIQ Book from GE Healthcare in the truck. What will you assess with this device?

In fact, this system has a wide array of clinical uses for us in sports medicine: Veins, tendons, muscles, cartilage,... all these soft tissues can be visualized to assess morphology, injury, blood flow and much more. For us, ultrasound is a key instrument. We chose LOGIQ Book because it offers full functionality in a portable, robust design.

International Academy of Medical Ultrasound DATES for 06/07

TOPIC	CHAIRMAN	LOCATION	DATE
VISUS 3D/4D - ROMANIA (engl.)	Prof. Dr. F. Stamatian Prof. Dr. R. Badea	Cluj Napoca, Romania	**23 - 25 Nov. 06**
ADVANCED COURSE IN FETAL MEDICINE (engl.)	Prof. S. Derbala	Cairo, Egypt	**8 - 10 Jan. 07**
MISUS 3D/4D (spanish)	Dr. L. Mercé	Madrid, Spain	**9 - 10 Feb. 07**

» REGISTRATION: www.iamu.info email: iamu@med.ge.com phone: +43-7682-3800-380

CONGRESSES 06/07

TOPIC	LOCATION	DATE
RSNA	Chicago, USA	**26 Nov. - 1 Dec. 06**
EUROECHO	Prague, CZECH REPUBLIC	**6 - 9 Dec. 06**
38th BMUS ANNUAL MEETING	Manchester, UK	**12 - 14 Dec. 06**
ECR	Vienna, AUSTRIA	**9 - 13 March 07**

IMPRINT:

Publishers:
GE Healthcare
Marketing Department Europe
Beethovenstraße 239
42655 Solingen

Editor–in-chief:
Pierre Radzikowski
gepost@med.ge.com
Tel: +48 2275 14103

Concept and Production:
ICS Media GmbH
A-4860 Lenzing, Austria
E-mail: office@ics-media.at

Printing:
Kroiss & Bichler GmbH & CoKG
Römerweg 1
A-4844 Regau
office@kb-offset.at

GE ULTRASOUND OFFICE ADDRESSES:

AUSTRIA
General Electric Austria GmbH
Filiale GE Healthcare Technologies
EURO PLAZA, Gebäude E,
Wienerbergstrasse 41, A-1120 Vienna
Phone: (+43) 1 97272 0
Fax: (+43) 1 97272 2222

BELGIUM
GE Medical Systems Ultrasound
Eagle Building, Kouterveldstraat 20
1831 DIEGEM
Phone: (+32) 2 719 7204
Fax: (+32) 2 719 7205

CZECH REPUBLIC
GE Medical Systems Ultrasound
Vyskocilova 1422/1a
140 28 Praha

DENMARK
GE Medical Systems Ultrasound
Park Allé 295, 2605 Brondby
Phone: (+45) 43295 400
Fax: (+45) 43295 399

FINLAND & ESTONIA
GE Medical Systems Ultrasound
Malmin Kauppatie 18
00700 Helsinki
Phone: (+358) 985 606896

FRANCE
GE Medical Systems Ultrasound
Primary Care Diagnostics France
11 Avenue Morane Saulnier,
78457 Velizy
Fax: (+33) 13 449 52-02
General Imaging
Phone: (+33) 13 449 52-43
Cardiology
Phone: (+33) 13 449 52-31
Service:
8, Rue Paul Dautier
F-78140 Velizy-Villacoublay
Phone: (+33) 1-69-18-54-02
Fax: (+33) 1-64 46 32 48
Lunar:
1, Avenue d'Aix en Provence
F-13410 Lambesc
Phone: (+33) 4-42-57-17-97
Fax: (+33) 4 42 57 17 99

GERMANY
GE Medical Systems Ultrasound
Beethovenstr. 239, 42655 Solingen
Phone: (+49) 212– 28 02-28
Fax: (+49)212– 28 02-47

GREECE
GE Medical Systems Hellas
156 Kyprou Av.& 91 Konstantinoupoleos
Str. Argyroupolis, 164 51 Athens
Phone: (+30) 210 9690990
Fax: (+30) 210 9625931

ITALY
GE Medical Systems Italia S.P.A,
Viale Fulvio Testi 280 B
20126 Milano
Phone: (+39) 02 642201
Fax: (+39) 02 64220 347

NETHERLANDS
GE Medical Systems Ultrasound
Cobaltstraat 7
2718 RM Zoetermeer
Phone: (+31) 79 363 1616
Fax: (+31) 79 363 1615

NORTHERN IRELAND
G.E. Healthcare,
Victoria Business Park,
9, Westbank Road,
Belfast BT3 9JL.
Phone: 028 90229900

NORWAY
GE Medical Systems Ultrasound
Tasenveien 71, 0873 Oslo
Phone: (+47) 2202 0800

NORWAY
GE Medical Systems Ultrasound
Strandpromenaden 45,
P.O. Box 141, 3191 Horten
Phone: (+47) 33 02 11 16

POLAND
GE Medical Systems Ultrasound
Al. Wilanowska 372
02-665 Warszawa
Phone: (+48) 330 83 00

PORTUGAL
General Electric Portuguesa,
SA. Avenida do Forte, n° 4, Fraccao F
2795-502 Carnaxide,
Phone: (+351) 21 425 1309
Fax: (+351) 21 425 1343

REPUBLIC OF IRELAND
G.E. Healthcare,
Unit F4, Centrepoint Business Park,
Oak Drive, Dublin 22
Phone: 01 4605500

RUSSIA
GE Medical Systems Ultrasound
Kosmodamianskaya nab., 52
113045 MOSCOW

SPAIN
GE Medical Systems España
Avda. Europa 22
(Parque Emp.La Moraleja)
28108 Alcobendas-Madrid
Phone: (+34) 91 663 2500
Fax: (+34) 91 663 2501

SWEDEN
GE Medical Systems Ultrasound
PO Box 314
17175 Stockholm
Phone: (+46) 0855950010

SWITZERLAND
GE Medical Systems Ab
Europastrasse 31, 8152 Glattbrugg
Phone: (+41) 1 809 92 92
Fax: (+41) 1 809 92 22

U.A.E
GE Healthcare Holding
Suite 1101
11th Floor City Tower 2
Sheik Zayed Rd. Dubai, U.A.E
Phone: (+971) 4 3131 207
Fax: (+971) 4 3321802

UNITED KINGDOM
GE Medical Systems Ultrasound
2, Napier Road, Bedford MK41 0JW
Phone: (+44) 1234 340881
Fax: (+44) 1234 266261

Printed in Austria - 300-06-U036E