

Healthcare transformation, we'll take you...

**AGFA**   
HealthCare

# THERE

Edition 10, 2011

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# True quality needs passion

Is there anything new in as traditional a domain as wine-making? After all, man has been making wine for some 8000 years. And yet, people with a passion for what they do always manage to find inspiration – and that's as true in our business as in the wine business.

Just as there are parallels to our values in themes as broad ranging as cities, architecture and restaurants, explored in previous issues of *THERE*, now we can recognize many of our principles in contemporary wine-making. Respect for tradition combined with a modern focus, constant refining of techniques, listening to customers and working together to find inspiration and passion. And it all goes towards achieving a single goal: quality without compromise.

It's a goal worth striving for, and in this edition of *THERE*, we explore some concrete examples of people and organizations that do just that. Such as an interview with Prof. Christian Herold, Past President of the European Society of Radiology that organizes the European Congress of Radiology (ECR) every year. His passion for his work, for interdisciplinary cooperation – i.e. teamwork across traditional borders – has influenced all of us who are dedicated to this sector.

But quality without compromise comes at a price: hard work, flexibility, speed and pinpoint accuracy. And it requires full attention and awareness of the situation. Winemakers watch the weather, and adapt accordingly. We, on the other hand, must focus on the changing healthcare environment. We do this not only by developing new products, but by finding new ways to put



our already-extensive product range to best use for our clients. By developing scalable growth paths. By creating regional-level programs for delivering accessible, high-quality, efficient, safe and financially-sound healthcare. By offering the types of solutions we will be highlighting at ECR this year.

As you read the stories in this issue, find your inspiration – and apply it to what you do. Imagine the possibilities if we all bring our passion into play!

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# Viennese WienWein: Making “green” quality wines that appeal to a growing worldwide audience



The “WienWein” vintners (from left to right): Michael Edlmoser (Mauer), Thomas Podsednik (Winery Cobenzl), Gerhard Lobner (Mayer am Pfarrplatz), Rainer Christ (Jedlersdorf), Alex Skoff (Winery Zahel) and Fritz Wieninger (Stammersdorf).

Making quality wines with a small, ecological footprint is what unifies six young winemakers from Vienna, Austria. Some years ago, they decided to team up and make themselves heard in the immensely competitive wine world. With their group WienWein, they have established new quality standards for Viennese wines and achieved international acceptance.

Working together in research, product development and marketing, these young winemakers have achieved the necessary visibility and critical mass that provides credibility in the winemaking world. Their collaboration also allows them to be more cost-effective, sharing marketing and promotion costs. Their outspoken views on respecting traditional methods of growing a large mix of grapes, on careful cellar vinification, and establishing strict regulations for wine production that surpass Austrian Wine Law, have earned them the respect and recognition of the wine-loving world.

Their collaboration culminates in a new wine called Gemischter Satz. Contrary to the well-known cuvée wines, Gemischter Satz is born when vines of various grape varieties are grown,

harvested and vinified together in one vineyard. Traditional cuvée wines have grape varieties that are harvested and fermented separately before being blended and bottled.

To protect grapes in their vineyards, WienWein winemakers use biodynamic treatment; no pesticides, herbicides or chemicals. The homeopathic management of the vines results in a younger, more modern taste. However, it comes at a cost. Living by the weather instead of the calendar, they need to diligently monitor weather and disease forecasts. Using sophisticated forecast software, they manage to adapt their resources to the weather circumstances. This additional cost amounts to 25 or even 30% beyond that of conventional winemaking.

As a result, the WienWein aficionados have to be better organized, faster, more accurate in their timing and more flexible during the growing and harvesting season. Nevertheless, they achieved their goal, with sales in 29 countries worldwide and annual sales growing by 20 – 25%. Saving natural resources comes at a cost but seems to appeal to a growing worldwide audience.

WIEN



# “We are a trusted partner because we stay close to our customers”

“We are trusted by local healthcare providers because we’ve proven we’re here to stay and that we stay close to them. We share our knowledge and in return, they inspire us,” summarizes Franz Tiani, General Manager for Central and Eastern Europe (CEE), describing the relationship Agfa HealthCare has with the region’s healthcare providers.

**INTERVIEWEE** Franz Tiani, General Manager for Central and Eastern Europe



“We manage both the largest and smallest facilities, meeting their needs and expectations that address real-world realities.”

FRANZ TIANI, General Manager for Central and Eastern Europe, Agfa HealthCare

The Agfa HealthCare organization here was created in 2006 and, at that time, covered just three countries: Poland, the Czech Republic and Hungary. Today, Agfa HealthCare covers almost the entire region including Poland, the Czech Republic, Romania, Bulgaria, Serbia, Montenegro, Kosovo, Albania, Macedonia, Bosnia, Croatia, Slovenia, Hungary and Slovakia, with a reliable network of exclusive business partners in each nation.

Of the fourteen CEE countries, seven joined the European Union and two adopted the euro. These markets are now injecting EU funds into the integration and centralization of their healthcare systems. Franz Tiani has Viennese roots and is all but unfamiliar with the patchwork of the region’s cultures, religions and mindsets: “They have been set back by the world financial crisis, but they will all catch up in the coming years with economic growth figures that will exceed European growth. Their healthcare systems, currently lagging behind in terms of life expectancy and mortality rates, will improve just as strongly.”



### ACTIVE INVOLVEMENT AND A STRONG LOCAL NETWORK BUILDS SOLID RELATIONSHIPS

With national healthcare systems in each country, the requirements for technology companies to meet local needs and regulatory compliance are demanding. Agfa HealthCare is present in each country with a strong and experienced sales organization, says Franz Tiani. “We successfully cover the whole territory of CEE. That is key to success in a region with varying local viewpoints, religions and languages. The second key success factor is that we entered the CEE market early. We have a very dedicated support network now. So we meet two essential conditions to be accepted by the local healthcare providers: our solutions come in the local language, and our representatives are present everywhere, not just in the capitals. Our exclusive agents completely identify with Agfa HealthCare and they are proud to be part of our organization. They have access to our resources and are trained by our headquarter specialists.”

For years, Agfa HealthCare built strong local relationships across the region, providing opportunities for discussion on analog to digital migration issues at our PACS Academy. There is also opportunity to ‘tune into industry trends’ at congresses, seminars, and roundtable discussions. “Thanks to our local presence, we match the region’s healthcare needs with our experience. The result is affordable, state-of-the-art technologies which relate perfectly to local needs. Our staff members are considered partners, rather than

a salesforce. We are trusted, because we were the first major corporation to commit imaging professionals to the region, and because we’ve remained involved there all these years.” Franz Tiani illustrates with the Polish case, where Agfa HealthCare has been supporting the demand for more access to diagnostic imaging through its advanced teleradiology solutions. “We successfully integrated and centralized the workflow of ENEL-MED, a leading private healthcare provider in Poland, through our IMPAX 6 Picture Archiving and Communication System (PACS) that serves seven facilities and over 360 medical institution customers through teleradiology. We also have a second customer in that market using our teleradiology solutions; the Wojewódzki Szpital Specjalistyczny (Regional Specialist Hospital, Wrocław) which uses this technology to connect and integrate diagnostic images from ten remote hospitals in the region.”

### THE DRIVER OF GROWTH IS THE DEMAND THAT NEEDS TO CATCH UP

Although top-notch healthcare infrastructure and imaging technologies are available in CEE, it is too thinly spread, and often limited to the capitals or major cities of the region’s countries. From an Agfa HealthCare perspective, this is an interesting starting point. It makes no sense to deliver only high-end, volume-driven solutions to all parts of the CEE region. Franz Tiani believes this situation capitalizes on one of Agfa HealthCare’s strengths. “From a workflow perspective, we support both large and small clinics. Our tabletop

“You need to participate in their way of living to understand how to do business there.”

FRANZ TIANI, General Manager for Central and Eastern Europe, Agfa HealthCare

CR 30-X Computed Radiography solution provides an entry-level solution. However, at the same time we provide highly advanced systems for multi-room needs, like our latest DX-G and DX-M\* solutions which read both NIP and PIP plates, delivering some of the highest quality images in the industry.” Recently, Agfa HealthCare delivered no less than ten DX-G Computed Radiography systems to Ljubljana, Slovenia, together with a centralized PACS solution for over 300 users. It’s a perfect example of how Agfa HealthCare manages both the largest and smallest facilities, meeting their needs and expectations with solutions that address their real-world realities.

### THE REGION’S TRUE STRENGTH IS THE PEOPLE’S WILL TO CATCH UP

As a Viennese-born and raised Austrian, Central and Eastern Europe is a familiar environment to Franz Tiani. Vienna has absorbed many different Eastern European cultures into its daily living. “Warsaw, Prague, Budapest, Zagreb, Belgrade, Sofia - I visit them all, traveling half of my time. I also profit from the opportunities to enjoy the local culture. You need to participate in their way of living to understand how to do business there. I’m always impressed by the people’s character and the speed and eagerness with which they embrace their new freedom, as well as their strong desire to make it succeed. There is an eagerness among CEE citizens to catch up. They have high expectations for the future. People adopt new ideas quickly and translate them into action fast. This comes from their past experience of improvising and ‘making do’. It’s a realization that life doesn’t come for free and sometimes, you have to deal with it from a difficult angle.” •

“Our local staff members are considered partners, rather than a salesforce.”

FRANZ TIANI, General Manager for Central and Eastern Europe, Agfa HealthCare



\* DX-M is not available in the United States.



“Agfa HealthCare is committed to the fight against breast cancer. They provide reliable technology but also partner with us in patient-focused programs.”

DR. LIEBENS, Head of the Multidisciplinary Breast Clinic and Breast Screening Clinic ISALA, Saint-Pierre Hospital, Brussels

# Trivializing breast cancer kills women

“As we become more successful in the early detection and treatment of breast cancer, we tend to trivialize it. Yet 1 out of 9 women still get breast cancer. Half of them become depressed, their partners don’t know how to react and their families are in disarray. We need to stop trivializing breast cancer. It kills women,” says Dr. Fabienne Liebens, Head of the Saint-Pierre Hospital’s Breast Clinic and one of the world’s leading experts on breast cancer and mammography.

**INTERVIEWEE** Dr. Liebens, Head of the Multidisciplinary Breast Clinic and Breast Screening Clinic ISALA, Saint-Pierre Hospital, Brussels



**Dr. Fabienne Liebens is Gynecologist-Oncologist and coordinator of the Multidisciplinary Breast Clinic and Breast Screening Clinic ISALA, part of CHU Saint-Pierre Hospital in Brussels. She is passionately involved in saving women’s lives and assumes her societal responsibilities as Vice-President of the Belgian section of Europa Donna, the independent European Breast Cancer Coalition which currently has 42 member countries. The coalition works to raise awareness of breast cancer and mobilize the support of European women in pressing for improved breast cancer education, appropriate screening, optimal treatment and care as well as increased funding for research.**

## **A BREAST CLINIC WITH A HEART FOR WOMEN**

With some 170 cases per year, the Multidisciplinary Breast Clinic and Breast Screening Clinic ISALA is one of Belgium’s largest breast centers and a key referral clinic in the country. “Yearly we consult 6,000 women and perform some 13,000 breast examinations,” explains Dr. Fabienne Liebens. “Our staff numbers 40, of which 80% are women including 8 radiologists and 7 breast clinicians. We also consult with gynecologists, surgeons and GPs, and work with an oncology service in our building.”

The Breast Clinic started in 1991 within the Saint-Pierre Hospital campus and

moved into its own ambulant facilities close to the hospital in 2007. The facilities are astounding because of their look and feel, which is completely opposite to the classical hospital design. “We didn’t want women to feel like they were coming to a hospital,” underscores Dr. Liebens. “The reception and waiting room area is more like a lounge, which allows you to wait for your consultation in a relaxed way. The interior was designed by a female decorator who knows the clinic as a patient. People see no trace of mammography equipment or technology at the standalone clinic. All imaging, interventions and surgical procedures take place back at CHU Saint-Pierre.”



**“Our Leitmotiv is: behind each breast we treat, there’s also a woman to heal.”**

DR. LIEBENS, Head of the Multidisciplinary Breast Clinic and Breast Screening Clinic ISALA, Saint-Pierre Hospital, Brussels

The clinic’s décor helps win the loyalty of women who enter the screening program, believes Dr. Liebens, but it is no doubt the complete holistic focus that is the most reassuring and comforting. “Our Leitmotiv is: behind each breast we treat, there’s also a woman to heal,” says Dr. Liebens.

#### **CLINIC’S STAFF REFLECTS MULTICULTURAL DIMENSION**

As part of a public hospital, all clinic patients receive the same treatment regardless of ethnic background. About two thirds of patients are native Belgians. The clinic’s recruitment is based on breast cancer prevention programs. Screening is voluntary in Belgium, with only 1 woman out of 2 entering a program. This explains the relatively high amount of Belgian natives compared to the more multicultural dimension of CHU Saint-Pierre. Dr. Liebens: “Regardless, we integrate the multicultural aspect in our staff: we have natives from Belgium that are French, Dutch and English speaking. We also have staff from Greece, Poland, Morocco, Chili, Iran, and Vietnam. This allows us to cover most of the languages needed.

CHU Saint-Pierre’s multicultural section provides interpreters, but we don’t often need them.”

The clinic has two active sites and therefore needs strong quality control. Dr. Liebens is keenly focused on quality in treating a patient. The breast nurse is key in the concept. She’s the patient’s personal guide throughout the complete process. She is also the immediate liaison with medical and clinical staff on behalf of the patient, and is present at all medical consultations. “We have one breast nurse, supported by 4 assistants who interact with other clinical disciplines,” Dr. Liebens says. “The governmental plan stipulates one breast nurse for each 150 cases.”

#### **PATIENTS APPRECIATE HOLISTIC GUIDANCE**

“From a study of 1,000 patients leaving the surgical oncology department, 92% are satisfied with our care,” she adds. “Key to this satisfaction is that psychological support is not an option; rather a fully integrated component of all treatment. Few if any patients refuse this, and we found that even six months



after the surgical procedure, 65% considered the psychological support and counseling to have been very useful. This proves the importance of our holistic view of the patient.”

Dr. Liebens continues: “The clinic’s technology support of digital mammography systems, image enhancement software and associated



products is ‘well hidden’, but it is of course key to our success. We need fast and productive solutions and immediate support in case of problems.”

“Agfa HealthCare is committed to the fight against breast cancer. They provide reliable technology but also partner with us in patient-focused programs through support of a wide range of endeavors to increase breast health awareness among women and medical professionals. Agfa HealthCare was a key supporter of our release of Marie Mandy’s book, ‘Through the eyes of an Amazon’. This remarkable publication conveyed in words and art the real-life experiences of Marie, a breast cancer survivor, that will give heart to women who must face this disease, its social and emotional ramifications, and treatment up to and including partial or radical mastectomy.”

#### **ENCOURAGING SOCIETY TO SUPPORT BREAST CANCER PREVENTION RESEARCH**

Dr. Liebens is highly concerned about the lack of focus on primary prevention efforts involving breast cancer. The incidence of this disease in developed countries is increasing, but there’s little focus by institutions and industry on primary prevention. “The knowledge women have on how to prevent breast cancer is astonishingly low. The first Belgian research on this issue was, surprisingly, done only last year. It showed 85% of women questioned have no knowledge whatsoever of risk factors for breast cancer.” Video displays in the clinic’s lounge provide preventive information, and displays in a separate area convey results of prevention studies.

The situation is even more worrisome for breast cancer preventive research, feels Dr. Liebens. “In Belgium, where breast cancer incidence is 33% higher than the European average, there’s just one study currently underway in primary prevention for women after menopause, while there are hundreds of studies on therapeutic products. To meet my concerns, I have developed a risk calculator based on the Tyrer-Cuzick International Breast Cancer Intervention Study Model for Breast Cancer Risk Prediction. It allows us to predict the breast cancer risk of an individual woman and determine whether she is appropriate for pharmacological preventive treatment.” •

## Closing in on DR image quality

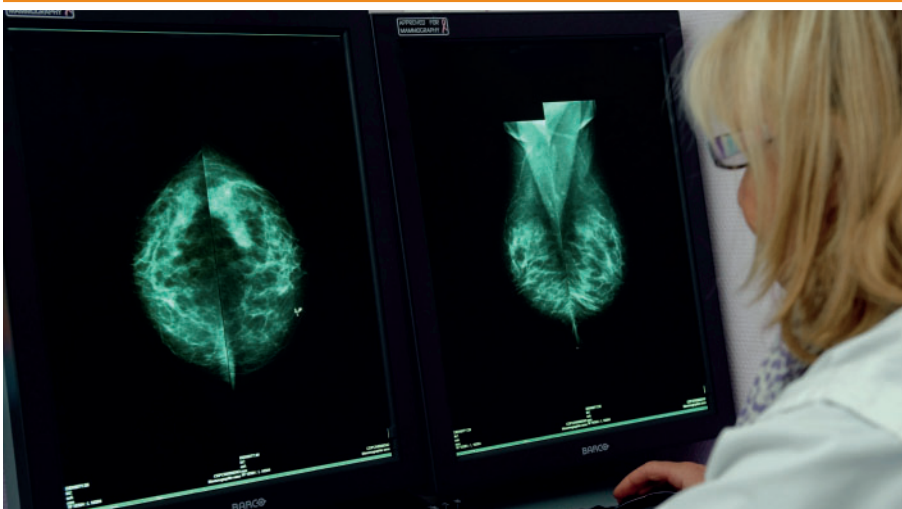
Radiologist Dr. Martine Van Beveren leads a team of 7 mammography radiologists that diagnose images using two Agfa HealthCare CR systems. They examine 45 women daily for clinical purposes, proactive screening or medical follow-up producing some 13,000 studies annually.



“As a mammography radiologist, I am particularly concerned about breast image quality and dose reduction. To make the patient as comfortable as possible, I also prefer fast solutions, which significantly reduce waiting and examination times. The Agfa HealthCare DX-M\* Digital Mammography system, in combination with CR HM5.0 needle based mammo detectors, considerably improves the performance of existing CR solutions. Our tests show its quality closes in on full Direct Radiography (DR) image quality with a considerable dose reduction.”

“I appreciate the commitment of Agfa HealthCare to mammography. They seek solutions that provide the best care for patients. I particularly like the low dose for patient safety, easy-to-manipulate tools for examination speed, and personalized profiles for radiologist efficiency. Generally speaking, in the future, I think radiology will see further enhancements in areas such as lower doses and better contrast for dense breasts.”

Dr. Martine Van Beveren sees a considerable dose reduction with the DX-M CR solution.



\* DX-M is not available in the United States.



## TRADITION AND CONTEMPORARY METHODS

The wooden barrels for Wiener Gemischter Satz contain several varieties of grapes for fermentation, which runs contrary to classical cuvées which are fermented separately before being blended and bottled. WienWein, a group of six young Viennese winemakers, stands for quality without compromise and an unshakable trust in the top vineyards around Vienna. The future lies in the return to traditional strengths, with environmentally “green” production methods.

# Serving all social classes in **The Golden Zone of Care**

A remarkable management philosophy supports one of this private hospital's main humanitarian goals – to provide the highest quality care to everyone regardless of income or ability to pay.

**INTERVIEWEE** Rodolfo Garza Solares, CEO



Based in Northern Mexico, Sanatorio Español Torreón provides healthcare for affluent, insured, as well as uninsured Mexicans. In reference to the famous Mexican “zona dorada” (“golden zone”, an elite stretch of beach with all the amenities not unlike Acapulco), the hospital recently created “la Zona Dorada Hospitalaria”. This Golden Zone of Care stretches over 25 blocks in the city center of Torreón. In it, Sanatorio Español Torreón has assembled the region’s most experienced healthcare providers to provide top notch services in all major clinical disciplines. It is the largest concentration of healthcare services in the region. For \$88/€65 per month (\$44/€32 if less than 15 years old), patients become “associates” of the hospital and benefit from free healthcare or treatment at a significantly reduced rate. Local charities ensure wide and equal access to the uninsured.

Sanatorio Español serves the City of Torreón in Northern Mexico, an industrial and economic hub of 1.2 million in the nation’s ninth-largest metropolitan area. The hospital was founded in 1907 by a group of wealthy Spaniards to serve the medical needs of the city’s growing expatriate Spanish population.

“All doctors want to practice using technology at the forefront of their profession.”

RODOLFO GARZA SOLARES, CEO, Sanatorio Español





“The Agfa HealthCare technical staff was highly knowledgeable in IT solutions and very attuned to our social mission.”

RODOLFO GARZA SOLARES, CEO, Sanatorio Español

Though the 80-bed private hospital is today considered a ‘small’ facility compared to larger public institutions, its buildings and interiors are quite luxurious. Many compare its character to a 5-star hotel with all the amenities. With a 64 percent occupancy rate, the hospital’s 620 full-time employees, including 30 staff physicians, oversee the latest medical technologies and treatments.

This outreach is financially supported, in part, by a constant emphasis on using new technology to control operating costs wherever possible. It is a major reason why Sanatorio Español can support its unique mission of serving the affluent, yet be flexible to accommodate all regardless of income or heritage.

Despite having only 80 beds, the radiology department employs four full-time radiologists. Other medical and clinical departments are similarly staffed. While some may consider this ‘overkill’ for a small institution, it is able to retain many skilled professionals in part due to the cost efficiencies gained through technology that expedites clinical workflows, billing processes and reimbursements. Opening radiology to time and cost-saving digital workflows clearly illustrates the management’s philosophy at work.

**TECHNOLOGICAL SOLUTIONS SUPPORT THE HOSPITAL’S SOCIAL MISSION**

In 2007, the radiology department wanted a new enterprise-wide RIS/PACS to replace traditional analog and paper-based workflows.

But to reduce installation and operating costs in support of its public-spirited goals, a key requirement was the ability to link the new PACS with a pre-existing HIS, using off-the-shelf integration protocols compatible with HL-7 standards. This presented a challenge as most interfaces of this type involve



customized equipment, programming and software, which can be expensive, recalls hospital CEO Rodolfo Garza Solares.

**AGFA HEALTHCARE’S CONTRIBUTION**

» Ability to analyze IT integration needs and successfully link IMPAX Enterprise RIS/PACS to a pre-existing HIS using standard interfaces. A more efficient hospital-wide workflow results for improved revenue generation.

## SOLUTIONS

### IMPAX Enterprise:

- » An integrated RIS/PACS solution connecting all imaging and information systems within a hospital, hospital group or geographic area so data can flow seamlessly to all clinical areas.
- » Full DICOM/HL-7 compatibility links IMPAX Enterprise to HIS and a wide range of modalities and devices from other sources. Uses 'off-the-shelf' protocols versus more expensive, customized solutions.
- » Supports a complete hospital-wide digital workflow that is faster and more efficient than traditional processes.

"In a troubled economy, we felt it important to leverage the value of our existing HIS, which has served us well for six years, and make it the basis for a hospital-wide data service that can also export images to our referring doctors' offsite offices," he says. The IMPAX RIS/PACS was selected for its ability to meet the HIS integration requirement as well as a range of other benefits. In addition, two Agfa HealthCare CR systems were installed and linked to the network - one in radiology, the other in ER.

Says Rodolfo Garza Solares: "The Agfa HealthCare technical staff was highly knowledgeable in IT solutions and very attuned to our social mission. Their response was a proposal that had all the right economies. We also learned that IMPAX Enterprise linked to our HIS was the first of its kind in a private hospital in Latin America. As such, Agfa HealthCare wanted to make us a regional reference hospital for other facilities. This, complemented by having the latest RIS/PACS/HIS network, added a prestige factor as all doctors want to practice using technology at the forefront of their profession. Radiology referrals grew 10 percent by 2010. Overall hospital profitability has increased by 8 percent."

Along with this growth, a main benefit of IMPAX Enterprise has been the leveraging of the HIS into a regional and hospital-wide data base.

"This was especially critical with the IMPAX RIS," Rodolfo Garza Solares says. "Agfa HealthCare specialists adapted its technical properties to easily link with HIS billing, patient demographics, and similar data with everything displayed on one screen. You don't have to do everything twice. Time-wasting errors are significantly reduced because both systems share data and backstop



each other. Invoicing for completed procedures is faster so payments arrive sooner."

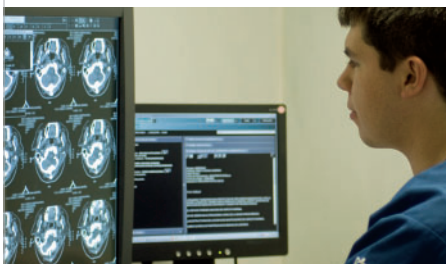
### INNOVATIVE MANAGEMENT PHILOSOPHY HELPS RECRUIT AND RETAIN TOP STAFF

The CEO adds that while the complete RIS/PACS installation and HIS integration took less than two months, the full transitioning of radiology department staff from analog to digital, including individual in-depth training, took about a year.

Staff radiologists and physicians were convinced by three points: excellent image quality of the CR systems and digital workstations at nursing units and ER; the ability to quickly compare

archival and current images on one screen, and; eliminating the need to visit radiology to view images as was done previously without remote access. Additionally, radiology staff works more efficiently in a more dynamic environment than before. Patient information is more accurate and complete, and X-ray reports are ready in three hours versus two days.

Sanatorio Español Torreón's innovative management philosophy gives it the ability to competitively compensate top doctors and clinicians. This helps it retain superior professional staffing in Mexico, which further facilitates its provision of high quality service to all people regardless of heritage or income. •



### DID YOU KNOW...

- » The first Spanish mission settled in Torreón in 1566 led by Pedro Espinareda, a Catholic priest.
- » To complement its humanitarian mission, Sanatorio Español Torreón now has an environmental goal of eliminating all patient paper records by 2012.

# Technology Corner

## New developments keep our solutions in the forefront

As a leader in the fast growing market of IT systems that span the entire healthcare enterprise, we continue to expand the potential of the IMPAX solutions into ever-more imaging applications, such as Nuclear Medicine. At the same time, new developments keep us in the forefront of this trend, focusing on continuously improving quality of care, speed and cost-effectiveness. These new solutions continue to bring the advantages of IMPAX to hospital staff and management – and even beyond the walls of the facility.



### IMPAX Kiosk in Europe: Self-service hospital check-in (Work-in-Progress)

IMPAX Kiosk, first launched in North America in 2010, is a self-service check-in kiosk designed to improve the patient experience and reduce the waiting time at registration. It also decreases administrative costs and risk of error, as patients identify themselves, check in and sign documents electronically.

### IMPAX Business Intelligence: Better tools for decision-making (Work-in-Progress)

The new IMPAX solution for Business Intelligence answers the need for better decision-making support tools in radiology. The system provides historical, current and predictive views of operations. Real-time dashboards, management reports and ad-hoc queries are all available in a single web browser, enabling physicians and hospital management to monitor, measure and streamline radiology operations.

### IMPAX Exchange: Secure and reliable transfer of information (Work-in-Progress)

The work-in-progress IMPAX Exchange offers a secure and reliable way to transfer critical medical information from one hospital to another, without the use of CDs. Images being transferred are traceable and are automatically linked to existing patient information and studies in the Picture Archiving and Communication System (PACS).

### Automated workflow and specialized features: IMPAX for Nuclear Medicine

IMPAX for Nuclear Medicine offers a full, integrated suite of solutions that automate the workflow of the Nuclear Medicine department, and optimize communications with other departments. Users can schedule the patient's complete exam flow, from arrival at the hospital, to the final distribution of Nuclear Medicine reports. OASIS for IMPAX adds a fully featured Nuclear Medicine viewing and processing package, allowing the user to access advanced features for viewing and processing of NM, SPECT, PET and multi-modality images, at the click of a button.



## REVIVING A CULTURAL FIT

One of Europe's most baroque gardens in Schloss Schönbrunn park had an active vineyard until the 18<sup>th</sup> century. Together with the operating company of the Schloss and the Austrian federal garden agency, WienWein, a group of six young Viennese winemakers, planted the vineyard anew with a colorful range of varieties growing together on 1,000 m<sup>2</sup>: Grüner Veltliner, Riesling, Chardonnay, Neuburger, Zierfandler, Rotgipfler, Welschriesling, Grauburgunder and Traminer. True Wiener Gemischter Satz! The winemakers' combined efforts made this cultural fit between Vienna and the winery come alive again for people the world over. The strength of teamwork has made a dream come true.

## High-tech requires high-touch

In a world of technology, people long for personal, human contact. As technology gains speed and allows for accelerated patient flow, more and more healthcare experts draw the attention to the importance of a holistic and humane patient approach. Diagnostic and therapeutic quality of care in mammography need to go hand in hand with an empathic patient relationship, advocates Dr. Britt Gajek of the Trier Radiology Group Practice.

**INTERVIEWEE** Dr. Britt Gajek, Specialist in Diagnostic Radiology



“For us, efficiency is the satisfaction of the patient and of the referring physician. This is our main focus. In this respect, humanity and kindness are what matters.”

DR. BRITT GAJEK, Specialist in Diagnostic Radiology, Trier Radiology Group Practice

In Germany, breast cancer is the most common cancer in women. Approximately one tenth of the female population is affected by the disease at some point in their life. Curative mammography is an important part of pre- and post-treatment care and is primarily conducted in radiology practices, including the Trier Radiology Group Practice, the city’s largest. “In addition to mammography, we offer a wide range of X-ray examinations and services,” explains Specialist in

Diagnostic Radiology Dr. Britt Gajek. “For example, we offer cross-sectional diagnostic imaging, CT and MRI as well as nuclear medicine and ultrasound. So my colleagues at the practice include a Neuro-Radiologist, a Specialist in Nuclear Medicine and a Radiography and Radiotherapy Specialist – which is really quite unusual.” The practice handles about 40,000 cases a year, a good 6,000 of which are in mammography.

### QUALITY FOR BETTER PATIENT SAFETY

In mammography, particular attention is required when medical uncertainties need to be resolved. This requires well-organized practice procedures.

### AGFA HEALTHCARE’S CONTRIBUTION

- » Superb image quality with potential dose reduction
- » Solutions that help radiologists and technologists give patients their full attention



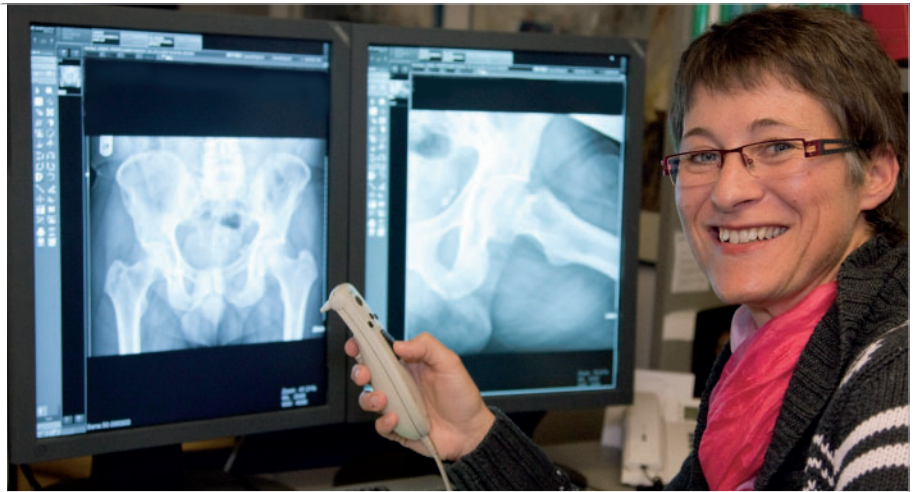
## SOLUTIONS

### DX-M solution:

- » cutting-edge CR solution for mammography and general radiography
- » Reduce radiation dose by 30 percent
- » Better image quality and more reliable diagnostics

“With solutions from Agfa HealthCare, we can improve our services and the quality of patient care.”

DR. BRITT GAJEK, Specialist in Diagnostic Radiology, Trier Radiology Group Practice



“Our aim is to ensure the highest possible diagnostic and therapeutic quality of care for patients through a continuous development process. We have a certified internal quality management system to help us achieve this. It involves systematic patient orientation, continuous quality monitoring and improvement, as well as structured cooperation at care interfaces,” explains Dr. Gajek.

“For mammography we use the latest technology, not only in respect of the X-ray units themselves, but also in relation to image processing and image development quality. At all levels, we work to the highest quality.” Two Agfa HealthCare DX-M\* mammography CR solutions have been helping practice staff to achieve this quality level.

### CR MAMMOGRAPHY TECHNOLOGY IMPROVES PATIENT SAFETY, STAFF SATISFACTION AND EFFICIENCY

How does quality in the Trier Radiology Group Practice manifest itself to mammography patients? “X-ray examinations involve radiation exposure. Our aim is to minimize this exposure, and with our digital technology, we can do just that. Women with dense breasts benefit the most from this. In such cases, we can reduce the radiation dose by about 30 percent,” explains Dr. Gajek. “With the new systems, image quality is even better. I can now detect the smallest amount of micro-calcification faster and easier and can better evaluate architectural distortions in the breast. This is still more evident with normal X-rays: every single strand of bone tissue can be seen in sharp detail, which makes fracture diagnostics considerably easier. Also with lung exams, we can assess the fine and connective tissue structure much better.”



For the Radiology team at the practice, quality improvement, especially through the use of new technologies, is evident on three levels: there are huge benefits for the patients, the staff is happy to be working effectively, and, ultimately, the doctors’ work is made easier. “And there, I think we’ve taken another huge step forward over the last four months,” says Dr. Gajek.

### NEW TECHNOLOGIES ARE NOT THE “BE ALL AND END ALL”

Of course, just like a hospital, a practice must keep an eye on the cost and efficient use of technology. “However, we do not measure efficiency by the number of patients we treat. For us, efficiency is the satisfaction of the patient and of the referring physician. This is our main focus. In this respect, humanity and kindness are what matters. Our motto is: listen to patients, examine them meticulously, evaluate the images responsibly and always address patients

at eye level. I wouldn’t want it any other way. Bigger numbers and faster throughput, in my opinion, should not be the focus of medical activity. Personal patient contact is so much more important than people think. At the end of the day, that’s what makes up about 80 percent of the time patients spend in the practice. The technology may be getting faster, but if we remain human and talk to patients and are tactile with them while still providing excellent clinical examination, then the procedures do not need to change any more.” •

### DID YOU KNOW...

- » Trier Radiology Group Practice is the largest in the city and offers a wide range of services.
- » The practice performs 40,000 radiological examinations a year.
- » In Germany, breast cancer is responsible for 29 percent of all new cancer cases in women.

\* DX-M is not available in the United States.

# “We need to educate a leadership generation of radiologists”

As imaging technologies evolve, the clinical challenges facing healthcare professionals are growing more complex. Obtaining timely and valid answers will require intense collaboration between medical disciplines and research groups from all continents, says Prof. Dr. Christian J. Herold, Former President of the European Congress of Radiology (ECR) and current Past President of the European Society of Radiology (ESR). “We need to educate a leadership generation of radiologists.”

**INTERVIEWEE** Prof. Dr. Christian J. Herold, Professor of Radiology at Medical University Vienna, Austria, and Faculty Member at Johns Hopkins University, Baltimore, USA

One of Europe’s foremost radiologists, Prof. Dr. Herold, has a unique and clear view of the future of radiology. “With imaging technology as an enabler, the problems we need to tackle are rapidly becoming more complex. To solve them, we need not only interdisciplinary collaboration, but the knowledge and skills of research groups in different continents. Lung cancer screening is a good example. Ten years after they began, trials today indicate that CT screening may be reducing lung cancer mortality. This was the result of the collaborative forces of radiologists, pathologists, molecular biologists, thoracic surgeons and pulmonologists, with contributions from Asian, European and American groups. I call this a 3-dimensional collaboration grid.”



“The technology handshake is a cross-stimulation and cross-fertilization continuum, rather than a momentum.”

PROF. DR. CHRISTIAN J. HEROLD,  
Professor of Radiology at Medical University  
Vienna, Austria, and Faculty Member at  
Johns Hopkins University, Baltimore, USA

## LEADERSHIP DEPENDS ON TALENT, TRAINING AND A ROLE MODEL

“To manage this international scope, we will need leaders,” says Prof. Dr. Herold. He adds training of radiology residents should include developing leadership skills.

“Leadership is first talent and then training,” Prof. Dr. Herold says. “A third ingredient is a role model. If these three come together, you develop a generation of leadership in your environment. If you do not have them all, you have to rely on talent and individual initiatives alone, which are typically not enough

to guarantee the development of a leadership generation in a region or country. To change the future of radiology, you need people who take initiatives, see the problems and find solutions from inside their community.”

In this perspective, professional societies such as the European Society of Radiologists (ESR) have an important role to play, underscores Prof. Dr. Herold. “The primary role of these organizations is education in the principles and practices of radiology leadership. First, you need a tailor-made approach in radiologist training. Second, you need



“To change the future of radiology, you need people who take initiatives, see the problems and find solutions from inside their community.”

PROF. DR. CHRISTIAN J. HEROLD,  
Professor of Radiology at Medical University  
Vienna, Austria, and Faculty Member at  
Johns Hopkins University, Baltimore, USA

Prof. Dr. Herold sees an important focus on interacting closely with European institutions to stimulate the inclusion of imaging-relevant topics into the work packages of the Directorate-General programs.

#### **THE TECHNOLOGY HANDSHAKE IS INCREASINGLY DEFINED BY RULES AND REGULATIONS**

Moreover, interaction is the keyword when it comes to the relationship between the scientific radiology community and technology providers from industry. Prof. Dr. Herold: “The technology handshake is a cross-stimulation and cross-fertilization continuum, rather than a momentum. What would technology vendors do without a partner who assists in development, testing and justification of using new technologies in daily practice? Call it a privileged partnership.”

He points out that this continuous partnership has to be based on rules and principles that must be observed by both sides. New directives and guidelines are established all the time, and both sides should understand that this road of intense collaboration requires all to respect these rules. “The collaboration between industry and academic research has been increasingly shaped by government or university regulations. Inequalities between countries or regions will be leveled with firm guidelines which will make it more challenging to collaborate, but will also define safe ground from which to work together.” •

a playground in the international environment. This provides the opportunity to prove yourself and solve problems as part of a multinational and multidisciplinary team.”

Finding the resources to keep up research As we move from simple to complex questions, resources for research are essential: financial, staffing and intellectual. Academic institutions in Europe as well as the United States face the challenge that private radiology groups are brain-draining the universities of intellectually strong and capable talents, taking the best people away from

fundamental research, Prof. Dr. Herold points out. This can only change by the universities paying attractive salaries and offering interesting work environments.

Also, in times of economic crisis, research funds are among the first and main victims of budget cuts, both in US and EU. Says Prof. Dr. Herold: “In Europe, we tried to stimulate an ESR Research Fund. However, it was not successful because it is not within the European culture to individually support such funds as an altruistic way to help others. Perhaps it’s also due to there being no fiscal write-off, contrary to the US.”

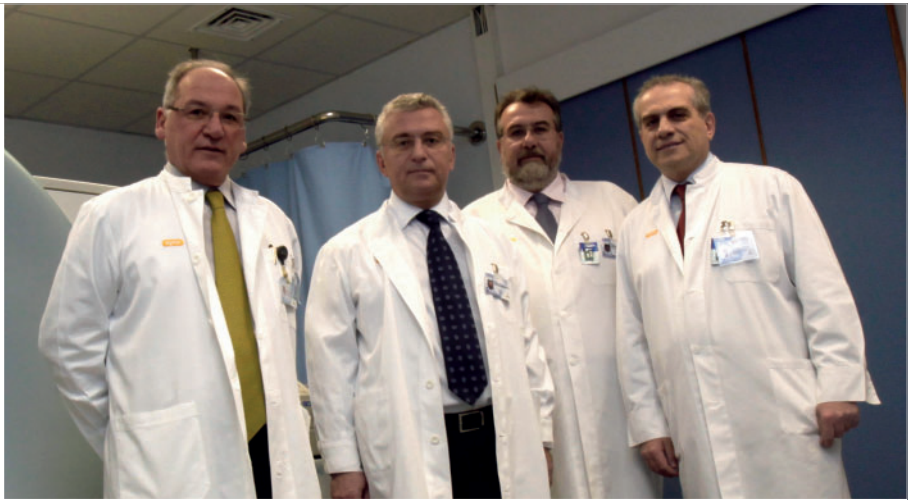
HYGEIA DIAGNOSTIC AND THERAPEUTIC CENTER, ATHENS, GREECE

# Cross-border patient care between Hygeia Group hospitals in Southeastern Europe

Focus on regional growth and investment in cost-effective technology supports healthcare group's promise to patients as well as shareholders.

**INTERVIEWEE** Dr. John Andreou, Head of Diagnostic Imaging Department





**“With the same staffing, we are able to care for more patients in a better, more agile and sophisticated way.”**

DR. JOHN ANDREOU, Head of Diagnostic Imaging Department



**Hygeia Group, consisting of seven private facilities in Greece, Cyprus and Albania, has a leading position as one of the most acclaimed healthcare organizations in Southeastern Europe. As a counterpart to its growth ambitions, Hygeia Group also functions as a socially responsible organization, helping to minimize patients' economic loads.**

When, for the first time, Greek authorities imposed a VAT of 11% on Greek health services, Hygeia hospitals decided not to pass the tax onto its patients, but absorb it to minimize the economic impact on the public. In addition, they also provided special economic pricing to patients with limited financial resources. It's a clear example of how Hygeia Group combines the constant pursuit towards high quality medical services with the necessary caring for its fellow citizens, who have been affected by current economic crisis conditions. It illustrates the empathic attitude of a group that is rapidly expanding into a major healthcare presence in Southeastern Europe, living up to its promise to shareholders.

Founded in 1970 with the vision of creating a world-class private hospital offering quality services at the cutting edge of technology, Hygeia (the Greek word for “health”) has turned into a listed company on the Stock Exchange, with more than 7,000 employees at seven hospitals with a total bed capacity of 1,768.

“Our vision is to become the largest private sector provider of integrated healthcare services in Southeastern Europe.” Hygeia’s mission statement is as concise as it is ambitious. But how do you combine creating shareholder

value with ambitious social outreach, yet remain a reference point for patients and medical staff? The answer lies in quality.

Investing in quality is in Hygeia’s genes. Interestingly enough, Hygeia today is the only hospital in Greece that has gained the globally respected JCI (Joint Commission International) healthcare quality accreditation, which primarily focuses on quality improvement, safety and expertise. JCI’s standards are developed by healthcare experts from around the world. Only 90 hospitals in Europe and 250 worldwide are JCI accredited.

**ALIGNING MULTIPLE HOSPITAL SITES IN SOUTHEASTERN EUROPE**

It goes without saying that for a medical group with such extended operations, it is more than crucial to implement a solid imaging solution that not only facilitates archiving, but also allows efficient communication between locations, departments and medical staff.

Hygeia’s hospitals in Greece and Albania are aligned through a single PACS solution - IMPAX from Agfa HealthCare - which offers a significantly more efficient

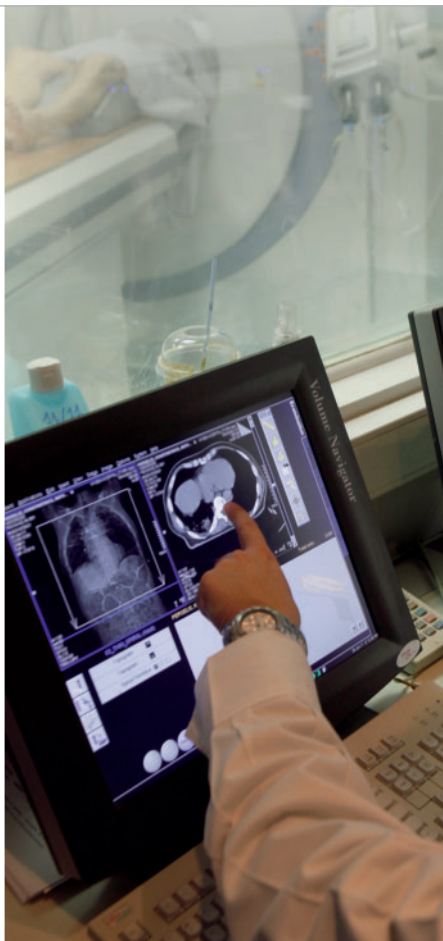
**AGFA HEALTHCARE’S CONTRIBUTION**

- » Noteworthy capability in successfully adapting to the hospital’s constantly upgraded technological needs.
- » IMPAX solution offers the flexibility to disseminate images and results within and outside the hospital’s walls including personal computers via a secured network.
- » IMPAX facilitates swift file management, generating more substantial time for medical professionals to concentrate on each patient’s needs.
- » Skilled support staff available 24/7.



“Repeat exams are now avoided in 90% of all cases, resulting in less hassle and radiation exposure for the patient, as well as lower intradepartmental costs.”

DR. JOHN ANDREOU, Head of Diagnostic Imaging Department



workflow. Says Dr. Andreou, Hygeia’s Head of Diagnostic Imaging Department: “It is extremely useful for a physician to look at a patient’s file directly from his hospital or even home office via a secured virtual private network and offer his advice in the most critical cases. For instance, there was a recent case of a young Albanian patient at Hygeia Tirana where we were asked for medical advice. Thanks to the IMPAX solution, we were able to view diagnostic images in Athens from all modalities in Albania and assist to the prompt care of the patient.”

Similar interconnectivity is also accomplished throughout Hygeia Hospital’s imaging departments, as the modular structure of IMPAX permits the fast access of data and images. Dr. George Zacharopoulos, Director of Ultrasound Department says: “It is now possible to log in to the PACS, go through and compare a patient’s diagnostic data, and have, at once, a complete, detailed review of his clinical history.”

Furthermore, as Dr. Andreou puts it: “The PACS solution’s greatest asset

is that, with just one simple click, the physician can access all previous exams, not only CT, MRI and PET CT but also US, GenRad, Mammography, Radiotherapy and Gamma Knife treatment and compare them to older ones. All this is performed in a highly interactive environment, providing a clearer view to a patient’s condition without the need for exam repetitions.”

#### PROFITABLE INVESTMENTS WITH HIGH-LEVEL SUPPORT MEET SHAREHOLDER EXPECTATIONS

Agfa HealthCare’s constant support meets the Group’s needs because its skilled personnel have the required expertise, and they are always available to help. Dr. Andreou comments: “Whenever there is a need for support, Agfa HealthCare has been highly responsive. You know, in the medical field, you must rely on solutions which can be immediately supported, as we do not have the luxury of time. This commitment to service is one of Agfa HealthCare’s key benefits, which has been proven during our long-term cooperation.”

#### DID YOU KNOW...

- » Over 60% of Hygeia Hospital’s patients are oncology cases that require multiple imaging exams.
- » Hygeia was the first hospital in Greece to undertake a heart transplant operation, and the first in Europe to implant radioactive particles to treat prostate cancer.
- » The Group currently maintains 71 operating theaters and 22 Intensive Care units.
- » Hygeia serves approx. one million in- and outpatients per year.

In times of recession, the Agfa HealthCare IMPAX solution is not only a reliable solution; it also can be a profitable investment. This is important to a healthcare organization like Hygeia, which made a policy to distribute significant returns to its long-term shareholders. “Eventually, this solution will transform healthcare, especially in terms of budgeting. We are witnessing a giant leap from previous, conventional times, when there was a constant need for various imaging and printing consumables and supplies. Using IMPAX technology in a fully digital workflow takes a huge financial burden off the annual budget,” stresses Dr. Andreou, adding: “As the benefits of PACS are more than overwhelming, the Group’s administration will certainly continue investing in quality, despite the recession. And this outcome is owed to Agfa HealthCare support, as well.” •

#### SOLUTIONS

- » IMPAX 6.4 Enterprise Suite
- » Increased productivity with quickly available information
- » Quick access to patient history
- » Fully integrated to hospital workflow
- » EPR image distribution
- » Teleradiology

“The success of the PACS project was the outcome of the good collaboration between Hygeia’s IT department, all diagnostic imaging departments and the Agfa HealthCare dedicated personnel. Hygeia’s strong management commitment was crucial for this success.”

DR. JOHN ANDREOU, Head of Diagnostic Imaging Department



## THE APPEAL OF ABSOLUTE QUALITY AND NATURAL TASTE

Grapes from different varieties grow next to each other on the hills around Vienna. They are grown in accordance with regulations the winemakers themselves agreed upon – even stricter than those set by Austrian Wine Law. “Quality without compromise,” says WienWein, a group of six young Viennese winemakers. No compromise to nature either. Strictly homeopathic treatment of the grapes results in a unique, young and modern taste. Nevertheless, growing and harvesting according to weather conditions is more costly than by the calendar. Still, even at premium prices of up to 30% above average, wine lovers the world over prefer the natural terroir taste of Viennese wines. Soaring sales in 29 countries are the result.

ODENSE UNIVERSITY HOSPITAL, ODENSE, DENMARK

# Odense University Hospital focuses on faster patient recovery

High-quality, integrated, supporting a fast patient flow: today's CR solutions help meet radiology needs of hospital service designed for the future.

**INTERVIEWEES** Gorm Andersen, CR Technology Leader · Trine Agertoft, Technologist

"Our mission in the Radiology Department is to give patients the best possible diagnostics and treatment. It is therefore important to have the best quality in all images, as well as the best infrastructure."

GORM ANDERSEN, CR Technology Leader &  
TRINE AGERTOFT, Technologist



**How do you design good hospital services for patients, relatives and staff, and reduce costs? Denmark's largest public hospital, Odense University Hospital (OUH), has introduced a service design concept which will also provide inspiration for the new 212,000 m<sup>2</sup> OUH hospital site planned for completion in 2018.**

The concept contains recommendations for service offerings, physical surroundings and core clinical services. Delivering an accelerated patient flow that reduces hospitalization and speeds recovery is achieved by involving patients and their relatives in treatment and securing consistent and clear communication between the patients, their relatives and healthcare staff. Patient surroundings are relaxing, safe and recreational, allowing relatives to

stay overnight and enjoy a wide range of healthy food at the restaurant. Patients are able to maintain contact with the outside world and work.

#### AGFA HEALTHCARE'S CONTRIBUTION

- » Long-standing relationship
- » Reliable support from the local service engineer and application specialist





## FLUENT INTEGRATION WITH EXISTING IMAGING SOLUTIONS RESULTS IN PATIENT-FRIENDLY ROLLOUT

With so many patients to be seen, it was important that rollout of the new CR solution did not disrupt examinations and patient care. The hospital phased in the rollout across its premises. Andersen said that setting up the DX-G CR and integrating it with existing solutions was fairly simple, as it is compatible with its Agfa HealthCare predecessor. “The switch from old to new went very quickly and easily,” said Andersen.

The plans for enhancing X-ray processing do not stop with the latest installation. Andersen and colleagues are now clinically testing the Agfa HealthCare DX-D 100 Direct Radiography (DR) solution. Like the DX-G CR, the DX-D DR works with the company’s NX solution, an easy-to-use image identification and quality control workstation with software tools, which is already installed throughout OUH’s Radiology Department. •

Odense, the third largest city in Denmark, is home to the nation’s largest public hospital with 1,300 beds and around 10,000 employees. As a teaching hospital, OUH works closely with the University of Southern Denmark, which is also based in Odense. The hospital trains almost 4,000 students every year and is responsible, with the university, for 140 PhD students and 40 professorships.

### NEW CR SOLUTIONS ALLOW FOR THE BEST POSSIBLE DIAGNOSTICS AND TREATMENT

With so many patients, staff and students, it is very important that X-ray exam results are available in a standardized format across the hospital. It is also important that examinations are processed quickly so that patients can be diagnosed and treated as soon as possible. The hospital’s most recent upgrade of its radiology capacity, in June 2010, was to roll out three Agfa HealthCare DX-G CR solutions supporting both standard phosphor plates and needle-based detectors, ideal for a broad range of applications. The main advantage is their speed. The DX-G CR solution can process around 83 plates/hour. “The patients are now in our department for a shorter period of time. The CR solution is simple and easy to work with. At the same time it takes up less space and makes less noise when reading plates than its predecessor.

Another benefit of the new solution is that the cassettes are in a closed system that minimizes damaging dust, scratches and fingerprints on the images,” pointed out Andersen, CR Technology Leader in the Radiology Department.

“Our mission in the Department of Radiology is to give patients the best possible diagnostics and treatment. It is therefore important for us to have the best quality in all images, as well as having the best equipment to make sure that patients stay in our department for the least amount of time,” said Andersen. “Within our radiology specialties we did approximately 213,000 medical examinations last year. The department has 25 examination rooms containing CT, MR, Angiography, Ultrasound and Computed Radiography (CR) solutions,” he continued.

**“The patients are in our department for a shorter period of time. The DX-G CR solution is simple and easy to work with.”**

GORM ANDERSEN, CR Technology Leader

### SOLUTIONS

DX-G CR solution:

- » Multi-cassette “drop-and-go” buffer
- » Fast preview to eliminate waiting times and facilitate continuous workflow
- » Processes approximately 83 plates/hour
- » DirectiX needle-based detector technology, which offers potential for reduced dosage

### DID YOU KNOW...

- » The hospital has 50 clinical departments in two sites - Odense and Svendborg.
- » Every year OUH’s ambulatory care units receive about 900,000 patients.
- » Around 105,000 patients are hospitalized at OUH every year.



# Technology Corner

## Complete Direct Radiography portfolio demonstrates scalable growth path



With our complete imaging portfolio, we offer solutions suitable for every healthcare organization at any level: departmental, hospital-wide, multi-site and even regional. We are committed to helping our customers deliver accessible, high-quality, efficient and safe care in a financially-sound way. Computed Radiography (CR) and Direct Radiography (DR) both have a role to play in this.

Within our portfolio, CR and DR technologies co-exist in a scalable growth path for digital imaging. From the fully-automated DR to the most basic CR, our products and solutions offer impeccable image quality, always backed by MUSICA<sup>2</sup> image processing and the convenience of the single user interface of the NX workstation.

### Our top-of-the-line direct digital X-ray room: DX-D 600

DX-D 600 is the most productive member of the DX-D family of Direct Radiography systems, for static imaging. Ceiling-mounted, it is ideal for facilities with a high patient throughput. Cesium Iodide DR detector technology and MUSICA<sup>2</sup> image processing provide high-quality images, while the automated tracking and collimation combined with the workflow integration optimize productivity. DX-D 600 offers a full portfolio of automatic, semi-automatic and manual configurations. The versatile ceiling-mounted system is equipped with dual Cesium Iodide DR detectors in the wall stand and table, with optional integrated CR as well.

### A scalable growth path from analog to digital: DX-D 400

With the cost-effective and versatile DX-D 400, facilities from small practices to large hospitals have the chance to go digital at their own pace. The floor-mounted DX-D 400 offers complete scalability and can be used with film, DR and CR, offering a smooth upgrade path to digital. It allows full leg/full spine imaging with automated stitching. Different configurations are possible, from an analog manual system, to a digital manual system, and up to a digital automatic system with auto-positioning, auto-tracking and a tubehead touch screen. Both CR and DR detectors can be integrated in the fully-motorized configuration. The DX-D 400 also offers a connection with the Picture Archiving and Communication System (PACS) and Radiology Information System (RIS). But while it meets the budget needs of smaller facilities and private practices, it makes no compromises in image quality or ease of use, thanks to the MUSICA<sup>2</sup> image processing software and NX platform.

### Wireless convenience: the mobile detector plate DX-D 30

With its wireless technology, the mobile detector plate DX-D 30 is convenient to use in challenging imaging situations such as the ICU or operating room, as the cord doesn't interfere with patient positioning. It also offers greater hygiene, since there is no trailing cable to pick up dirt and germs from the floor.

FIDI, SÃO PAULO, BRAZIL

# Teleradiology solution replaces adventurous motorbike shuttles through São Paulo

One of Brazil's largest diagnostic imaging groups has currently linked 8 separate locations throughout São Paulo, using Agfa HealthCare's new IMPAX Data Center solution. The plan is to link up to 25 hospitals at the end of the project.

**INTERVIEWEE** Armin Spirgatis, IT & Teleradiology Manager



“Most impressive so far is a major reduction in turnaround time for radiologist reports enterprise-wide.”

DR. ARMIN SPIRGATIS,  
IT & Teleradiology Manager



**Imagine processing, storing and managing over 3 million digital X-ray, CT and mammo exams each year, moving them seamlessly between multiple sites across a huge urban area. A novel teleradiology solution supported by vast central storage and sophisticated display tools makes it possible.**

Both private and government institutions, administered nationally by the Ministry of Health and Aging, provide healthcare in Brazil. It comes free at the point of care to all Brazilians, funded through general taxes. Though large, public healthcare facilities play a prominent role in medicine, 66% of the country's 7,806 hospitals, 70% of its 485,000 hospital beds, and 87% of its 723 specialized hospitals are in the private sector. In diagnostic support and therapy, 95% of such establishments are private.

#### IMPAX DATA CENTER WITH TELERADIOLOGY SOLUTION

- » Integrates images and information across regions, facilities and departments
- » Consolidates and shares data across disparate, multi-vendor PACS
- » Creates a single patient record – images, demographics, clinical test results, pharmacy
- » Ends data migration – modalities can now store data on IMPAX Data Center, eliminating added expense of independent storage
- » Stores rich variety of all DICOM 3.0 medical images and diagnostic results

Against this background is the Fundação Instituto de Pesquisa e Estudo de Diagnóstico por Imagem, or FIDI, a private, non-profit organization specializing in nearly all aspects of diagnostic imaging. It supplies a range of radiology services to 46 public hospitals in the City and State of São Paulo, as well as numerous stand-alone clinics and first aid units. FIDI employs more than 1,000 technologists, IT and clinical specialists, as well as 300 radiologists to support its service to the Southern Hemisphere's largest metro area.

#### EFFICIENT, DIGITAL IMAGE STORAGE AND DISTRIBUTION REPLACES NOISY MOTORBIKES

The evolution to an IMPAX Data Center solution linking all sites served by FIDI was nothing short of revolutionary, says Armin Spirgatis, FIDI's IT and Teleradiology Manager. "Most locations had PACS from a variety of vendors, but prior to the centralized teleradiology network, they couldn't talk to each other. So each facility printed films or CDs, and used a fleet of motorcycle couriers to convey images and information between sites. Motorbikes are the only way to get around São Paulo's highly congested street traffic. And there were still many problems – accidents, bad weather delays, wrong turns, noise pollution and lost or missing films or CDs."

FIDI's primary objective was to bring all imaging and information together in one, centralized processing system

#### DID YOU KNOW...

- » Agfa HealthCare is a leading player in Brazilian healthcare, having introduced a Portuguese version of its IMPAX software in 2006.
- » Average life expectancy in Brazil is 72.86 years, according to 2008 figures from the country's Institute of Geography and Statistics, an increase of more than three years from just a decade ago.

at a single data center in central São Paulo, and make it easily available, electronically, to all 46 customer sites.

A tender was soon issued for the IT portion of this massive project. Agfa HealthCare was selected based on its overall reputation, its experience with installing a similar regional network in Canada and its multi-year PACS expertise at one of São Paulo's largest government-owned institutions, and FIDI client, the Hospital for Public Employees, which performs more than 300,000 exams annually.

In addition to IMPAX Data Center technologies, the Agfa HealthCare contract included 15 stand-alone Computed Radiography (CR) systems spread across eight hospitals, to help transition all imaging to a digital platform. Dedicated fiber optic links were run to four huge public hospitals. In situations where it was impractical or expensive to hard-wire a network, a

» Ability to analyze all institutional data and network requirements, study and recommend radiology workflow improvements, present options and discuss a viable solution to meet specific needs. Agfa HealthCare has proven experience and expertise in successfully implementing a wide range of similar applications worldwide.

Finally, a change so revolutionary did not come without some skepticism and even resistance. "Investing significant time in familiarization training is paramount to acceptance and success," Armin Spirgatis says. "Our IT staff visited each hospital or clinic multiple times every week during installation and cutover, and even now, we regularly send our professionals to the front lines and discuss any issues. We also routinely meet with administrators, medical and financial management at each institution as they're our key stakeholders. Their support is vital to continued success."

Perhaps the solution's most convincing line of reasoning is regular open house events at the central data center. "It's very important to show users that this facility is real, and contains all the servers, networking systems and IT support specialists to maintain its reliable operation. These events go a long way in winning over even the hardest cynics," he concludes. •



microwave radio signal on a protected frequency was used. Others used Agfa HealthCare's MediWeb solution, allowing imaging results to be securely transmitted and viewed on a password-protected website.

**FIRST RESULTS – REPORT TURNAROUND GOES FROM A WEEK TO HOURS SYSTEM-WIDE**

While the network's execution phase has just begun, and statistics are still being compiled, some results have been immediately apparent. "Most impressive so far is a major reduction in turnaround time (TAT) for radiologist reports enterprise-wide," says Armin Spirgatis.

All FIDI clients have seen report TAT cut from five working days to about four hours. "For example, during September this year, approximately 2,800 digital imaging procedures were completed, and the average radiologists' report TAT averaged just four hours and 39 minutes," Armin Spirgatis says. "Better yet, there are no more missing images caused by physically transporting films and CDs from one location to another. The combination of the IMPAX solution with the Agfa HealthCare CR solution provides instant high quality image enhancement and manipulation features. Workstations throughout the organization can also access these images and viewing features, something we couldn't properly do shuttling around films and CDs by motorcycle."

According to Armin Spirgatis, the teleradiology network with its many workstations, central storage and processing, web-based access and individual CR equipment makes FIDI competitive in recruiting and retaining young radiologists who want to practice at the forefront of their profession. Most FIDI radiologists now work at the São Paulo remote reporting facility in a very high-technology environment with numerous perks and benefits.



# Agfa HealthCare receives **EUREF certification** for meeting rigorous European mammography screening image quality and dose standards

On the occasion of RSNA 2010, Agfa HealthCare was very pleased to officially receive the EUREF certificate from the EUREF delegation, at the University Club of Chicago. **THERE** spoke with Marc De Fré, Global Sales & Marketing Manager for Digital Radiography at Agfa HealthCare. The topics: how both CR 35-X and CR 85-X, in combination with CR MM3.0 plates, passed EUREF's physico-technical and clinical tests, and the long-standing commitment of Agfa HealthCare to breast imaging.

**INTERVIEWEE** Marc De Fré, Global Sales & Marketing Manager for Digital Radiography, Agfa HealthCare



Marc De Fré (Belgian) currently holds the position of Global Sales & Marketing Manager for Digital Radiography at Agfa HealthCare. His main responsibility is to create a consistent marketing message around the digital radiography solutions and to drive the sales of these solutions through the different regional clusters in Europe, NAFTA, Latin America and ASPAC. Marc joined Agfa HealthCare's Graphics Division in 1987 as a Project Manager for Image Processing Software and Scanners. In 1998 he became Marketing Manager of the Digital Printing Systems business unit. Moving to Agfa HealthCare in 2002, he was named as Marketing Manager Europe for Digital Radiography, before being appointed to his current position in 2006.



“We are pleased and proud with the EUREF certification, which we see as a confirmation of our commitment to offering the highest standards in our dedicated mammography solutions.”

MARC DE FRÉ, Global Sales & Marketing Manager for Digital Radiography, Agfa HealthCare

### What drives the long-term commitment of Agfa HealthCare to breast imaging?

According to the American Cancer Society, about 1.3 million women worldwide are diagnosed with breast cancer each year. The sooner the diagnosis is made, the faster the treatment can start, the shorter the treatment time will be and the higher the chance of the patient's recovery. Mammography screening is therefore a very important tool in the fight against breast cancer. Screening programs should motivate as many healthy women as possible to participate, to have the greatest likelihood of detecting lesions as early as possible.

But vendors of technology and equipment used for mammography screening also have an important role to play. They should aim to constantly improve their products to enable the detection of the smallest lesions at the lowest dose possible and facilitate diagnosis. Agfa HealthCare is committed to the fight against breast cancer and has invested a lot in mammography screening and breast imaging technology over many years.

### Agfa HealthCare is the first company to receive EUREF certification for its CR digitizers, and only the second (after DR vendor Hologic) to receive this certification for a digital mammography system. What does this mean to Agfa HealthCare?

EUREF certifications give healthcare providers confidence that the solutions and products tested meet the quality standards for the image quality, dose and stability needed in mammography

screening. Furthermore, countries that have implemented EUREF will in the future only accept EUREF-certified equipment for mammography screening applications.

We are pleased and proud with the EUREF certification, which we see as a confirmation of our commitment to offering the highest standards in our dedicated mammography solutions. It demonstrates that our products meet the rigorous quality control requirements for the physical and technical aspects of mammography screening, and perform reliably in a screening environment. More than 3000 mammography installations around the world can also testify to that.

### Which Agfa HealthCare products were included in the EUREF certification?

EUREF's rigorous physico-technical and clinical tests were performed by a cross-European team, and took about three months. After successfully passing them, our CR 35-X and CR 85-X digitizers received the Mammographic Type Test certification. The CR 35-X is a very versatile, small-footprint digitizer, while the CR 85-X is a multi-user, multi-application digitizer. Each can be used with our CR MM3.0 dedicated storage phosphor plate for diagnostic mammography applications, providing increased sharpness for superior image quality. Our CR solutions are also very suitable for mobile mammography screening, even in buses or trucks, as they are compact and not sensitive to temperature variations.

Currently, EUREF is performing tests on our DX-M\* digitizer, which can handle both needle-based detector

plates (NIP) and standard phosphor plates (PIP). The DX-M combines superior image quality with potential dose reduction, and is particularly well suited for mammography applications. In addition to EUREF certification, we are also aiming for FDA approval for the DX-M in 2011. This will enable us to market this next-generation CR solution also in the US.

### What other solutions does Agfa HealthCare offer that can help in the fight against breast cancer?

There is more to improving detection rates than image acquisition. Our image processing MUSICA<sup>2</sup> for mammography is optimized for rendering high quality diagnostic mammography images. On top, a new MUSICA MCE image processing option is specifically designed to enhance potential microcalcifications, making them more visible and easier to detect for the radiologist.

In addition, our dedicated imagers, the DRYSTAR AXYS and DRYSTAR 5503, have a high resolution of 508 dpi matching the 50  $\mu$ m modality resolution, without interpolation. This allows them to give the superior image quality required for diagnostic mammography images.

And with our breast imaging workstation, radiologists get a powerful combination of high-contrast, state-of-the-art monitors together with high-performance automation tools to improve the breast imaging workflow, supporting both diagnostic and screening environments. •

\* DX-M is not available in the United States.

LUTHERAN HOSPITAL, FORT WAYNE, INDIANA, USA

# Digital CR solutions help Indiana hospital maintain century of service excellence

Radiologists now work more efficiently and diagnose with greater confidence at Fort Wayne's Lutheran Hospital thanks to two, next-generation Computed Radiography (CR) solutions from Agfa HealthCare. The 403-bed facility is part of the region's 11-hospital Lutheran Health Network.

**INTERVIEWEE** Tom Earnest, Director of Radiology Services

Founded in 1904, Lutheran Hospital has earned respect for its cardiac, cancer, pediatric and emergency services as well as its certification for stroke treatment by America's Joint Commission on Accreditation of Healthcare Facilities. It's also a nursing Magnet hospital, a Level II trauma center, and is highly regarded in heart and kidney transplantation. In partnership with Lutheran Children's Hospital, its radiology department conducts 70 percent of its chest X-rays on neonates using Agfa HealthCare software and low-dose plates.







## LESSONS LEARNED

Tom Earnest offers the following recommendations for those interested in selecting and implementing an innovative CR solution:

- Evaluate potential vendors according to a wide range of benefits and criteria including exceptional image quality, dose reduction potential, workflow efficiency and minimal training.
- Secure input from clinicians, managers and technicians who represent the interests of multiple hospitals, departments or constituencies. Allow them to participate in the evaluation of competing systems.
- Take advantage of on-site demos. "Having the technology on site allows potential users to be informed and stay involved in the decision-making process," says Tom Earnest.
- Find a solution that can track and report on image quality and patient exposure.
- Look for CR solutions that permit easy image annotation and processing.

Lutheran's journey to install two CR solutions from Agfa HealthCare, the DX-G and CR 30-X, began when Tom Earnest, Director of Radiology Services for the Hospital, was looking to upgrade the enterprise PACS that supported four network hospitals.

Earnest assembled a 10-member team of radiology services directors, operations managers and technologists from five network hospitals to begin searching for a solution that met their radiologic needs. Among technologies being considered were the Agfa HealthCare CR solutions.

The search committee was impressed by the Agfa HealthCare solutions on a number of dimensions including image quality, dose reduction, ease of use, pricing and training that could be completed within a short timeframe.

### IMPLEMENTATION AND RESULTS

Agfa HealthCare got a head start by providing Lutheran Hospital with demo units of the DX-G, a primary high-end CR unit, and the CR 30-X, a tabletop CR solution for radiology departments with moderate-to-low volume, before the team made its final decision.

The CR units' ability to connect to the hospital's PACS within just a day and a half convinced Earnest and his team of the company's promise of ease of use, connectivity and trouble-free deployment.

Use of the DX-G's needle-based detector and powder phosphor plates has already improved image quality and lowered doses in the short period following implementation. Within the Neonatal Intensive Care Unit, the DX-G reduced radiation dose by more than 70 percent

in the first day, setting the stage for premature babies to get chest X-rays each day for two to three months with lower radiation exposure than with the hospital's prior solutions.

The technology has also produced a 20 to 30 percent reduction in adult radiation dose.

The user-friendly software requires much less image manipulation when reviewing images, leading to decreased exam times and saving valuable minutes on busy days.

Radiology Services also adopted the Agfa HealthCare quality control kit, which has allowed it to track and monitor image quality, control radiation exposure and analyze trends. "This product provides the level of sophistication we need to track exposures, techniques, case quality and continuity," Tom Earnest says. "We've been able to offer lower dose images and still maintain a high level of quality." •





## TEAMWORK BREEDS POWER

Six young Viennese winemakers have formed WienWein, a society of likeminded wine enthusiasts with outspoken views on respecting traditional methods of growing a large mix of grapes, and on careful cellar vinification. Their collaboration culminates in a new wine called Gemischter Satz. Contrary to the well-known cuvée wines, Gemischter Satz is born when vines of various grape varieties are grown, harvested and vinified together in one vineyard. However, each of the WienWein vineyards produces its own version of the Viennese Gemischter Satz, reflecting its preferences and character. The winemaker's marketing collaboration and joint product development does not dilute their individual brands, but gives them more visibility and credibility.

# Study reveals DX-M\* CR mammography system lowers dose and meets image quality guidelines

Poster outlines methodology, materials and findings

An independent analysis posted at the 2011 European Congress of Radiology (ECR) favorably compares image quality and dose reduction benefits of the Agfa HealthCare DX-M needle based Computed Radiography (CR) digitizer for mammography with other CR breast imaging systems, Direct Radiography (DR) and traditional mammographic screen/film systems.

The study was conducted by three Austrian researchers: Philipp Peloschek of Vienna's Wiener Privatklinik, Georg Langs and Friedrich Semturs of The Medical University of Vienna. In it, they compared needle-based CR mammography from Agfa HealthCare

with other digital and conventional mammography systems for image quality and dose levels that meet recommendations of the European Reference Organization for Quality Assured Breast Screening and Diagnostic Services, or EUREF.

Based in The Netherlands, EUREF's goal is to promote high quality mammography care in Europe through guidelines, training, and certification of mammography equipment.

Results showed that for image quality and dose levels, the needle-based CR system performed in accordance with EUREF directive EPQC-V4. In particular,

when compared to non-needle based CR systems, the dose is 25 to 40% lower.

Furthermore, a significant dose reduction was achieved for the screening-relevant population (50 years and older) compared to the previously used screen/film system. The researchers also determined the DX-M is well positioned between currently available CR and DR systems.

Based on clinical routine cases, the performance of the needle-based system has been demonstrated, the study concluded. The Agfa HealthCare MUSICA mammography software was used for all image processing. •

ALL INDIA INSTITUTE OF MEDICAL SCIENCES (AIIMS), NEW DELHI, INDIA

## Staff encouraged by reliability of mammography solutions

**INTERVIEWEE** Dr. Sanjay Thulkar, Associate Professor

**Agfa HealthCare won the Institute's tender to digitize both centralized X-ray and dedicated mammography imaging of the Dr BRA Institute Rotary Cancer Hospital, which is part of AIIMS. The proposal included the installation of Agfa HealthCare CR 85-X and CR 35-X mammography solutions with a DRYSTAR AXYS Direct Digital Imager (DDI).**

There have been many immediate benefits, according to Assistant Professor Dr. Sanjay Thulkar, starting with a hassle-free installation that quickly brought department staff up to speed and confident using their new system. "The installation was a positive experience. The Agfa HealthCare customer services professionals were excellent, very cooperative and knowledgeable, and quite effective at explaining how to use their products," he said.

The staff was also encouraged by the reliability of the solutions, Dr. Thulkar added. "All images are now of uniformly

good quality. Installing Agfa HealthCare solutions has eliminated any risk of image artefacts as well as over- or under-exposure with a lower potential for identification mismatch."

Ensuring consistent and reliable image quality was an important goal. But as Dr. Thulkar explained, there were also practical considerations. "We wanted to streamline our work, improve efficiency and also reduce physical storage space. Our technologists are pleased with the system because it makes their job easier and more convenient." •

### AGFA HEALTHCARE'S CONTRIBUTION

- » Excellent customer support and highly professional service
- » Smooth installation



"The Agfa HealthCare customer service professionals were excellent, very cooperative and knowledgeable, and quite effective at explaining how to use their solutions."

DR. SANJAY THULKAR, Associate Professor

\* DX-M is not available in the United States.

We image-enable Regional Care.

# Where? In Utopia?

Well, not in Utopia, but all over the world we actually live in. We call it regional health imaging – market-proven image and information management systems that implement multi-site integration up to the regional level. Consolidating radiology, cardiology, nuclear medicine ... any department that produces images – so that you can stay ahead of hospital and governmental requirements for sharing data and infrastructure. We offer a complete, configurable, single-source solution that helps standardize disparate IT infrastructures and consolidate patient records. Optimizing clinical resources, workflow and load balancing, reducing waiting times, and, ultimately, saving costs. To everyone's benefit. So, even though Utopia is not yet on our list, our integrated regional health program has your current world covered.

**We invite you to visit our booth at ECR 2011 for a demo! - EXPO A: BOOTH # 103**  
[www.agfahealthcare.com/ecr2011](http://www.agfahealthcare.com/ecr2011)

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