DAY 03 WEDNESDAY 30 JANUARY 2019

arab health

DAILY DOSE

THE OFFICIAL DAILY NEWSPAPER OF THE ARAB HEALTH EXHIBITION

Digital Health Start-Ups in the Spotlight at Inaugural Innov8 Talks

Technologies being showcased include a diabetes management app, a hand-held device to detect atrial fibrillation, and a smart navigation system to help the blind

The world's most creative and forward-thinking healthcare start-ups and SMEs have been taking part in the daily inaugural Innov8 Talks at Arab Health 2019.

Thirty two companies from around the world have been invited to present their ideas to an esteemed panel of judges that are involved in driving innovation in the Middle East & North Africa (MENA) region, and will include the world's only closed system for digital point-of-care urine testing – with the system launching at Arab Health - and Virtual Reality (VR) therapy for the home treatment of eye problems, amongst others.

On each of the four days of the show, eight companies have eight minutes to make their "pitch" for their healthcare innovation in a bid to be selected as a winning pitch and have a potential to shape the future of healthcare.

Commenting on the Arab Health Innov8 Talks, Ross Williams, Exhibition Director, Arab Health, said: "With the digital health start-ups industry said to be worth around $11.5 billion in 2017, the Innov8 Talks are an important platform to highlight the vital role that start-ups and SME's play in areas such as personalised medicine and technology-enabled care models. So far we've seen some amazing technology being presented including an app to detect atrial fibrillation and a hand-held device for the early detection of breast cancer."

MirambeauAppCare was one of the eight companies that participated in the Innov8 Talks pitch presentations, showcasing its diabetes management application. DiabiLive is a multiplatform medical application for diabetic patients allowing them greater autonomy by calculating the exact needed insulin dose based on medical protocol, diet and physical activity.

According to Nicolas Babin, Co-founder, MirambeauAppCare: "We decided to participate in the Innov8 Talks pitch at Arab Health because it is a fantastic opportunity to showcase our very innovative diabetes management solution. Last year we won the CES innovation award in Las Vegas so we want to see how our product is perceived at the biggest healthcare show in the region."

The panel of judges for Innov8 Talks pitch presentations include Dr. Mohammad Al Redha, Director, The Executive Office for Organizational Transformation, Dubai Health Authority; Mohamed Hamdy, Head of Venture Capital, Dubai Future Foundation; Saqr AlHemeiri, Chief Innovation Officer, Ministry of Health and Prevention; Mubaraka Ibrahim, Director of IT Department, Ministry of Health and Prevention; Marwan Abdulaziz, Executive Director, Dubai Science Park; Daniel Amir Raduan, Head of Digital Health, Etisalat; as well as Akbar Moideen Thumbay, VP – Healthcare Division, Thumbay Group.

In addition to the pitch presentations, each day of the Innov8 Talks is opened by a keynote speaker discussing topics ranging from genomics, Artificial Intelligence (AI) and the digital transformation of healthcare systems. During the afternoon sessions, the audience will hear from regional and international leaders in the field on how the latest healthcare innovations determined to enhance the delivery of care for patients.

Speaking under the theme of disease prevention and management, Sarper Tanli, Group CEO, Manzil Healthcare Services, discussed the transformation of healthcare delivery through translational innovation: "Each year, millions of people around the world enter their peak years of chronic disease and are set to become an unprecedented driver of healthcare costs. The innovation in digital health has enabled a transformation in the delivery of care, putting patients at the centre of care and personalising a host of services that address their unique needs, and preferences to manage chronic diseases."

Demonstrating Innovative Zero Radiation 3-D Imaging Approach

Dr. Sabine Ernst, consultant cardiologist and cardiac electrophysiologist at Royal Brompton & Harefield Hospitals Specialist Care (RB&HH), conducted a simulated catheter ablation for atrial fibrillation without using x-ray, yesterday at the show. The corrective procedure is well known, however Dr. Ernst's pioneering 3-D mapping technique, which removes the need for radiation, is unique.

Non-fluoroscopic catheter ablation for atrial fibrillation is an innovative treatment currently available at Royal Brompton Hospital in London. Dr. Ernst is, so far, the only practitioner using this approach, which entirely avoids using x-rays during the invasive procedure.

Arrhythmias, or abnormal heart rhythms, are widely experienced by people across the world. Atrial fibrillation is the most common form of arrhythmia and a major cause of strokes.

A U.S. study featured in *The Lancet* revealed the prevalence of atrial fibrillation in the Middle East triples with each decade of life compared to other developed countries, where it doubles with each decade of life. Additionally, twice as many women are affected by mitral stenosis than men in the Middle East, which leads them to develop atrial fibrillation more often. These trends may be attributed to increases in sedentary lifestyles, ageing, obesity, diabetes, and hypertension. This suggests atrial fibrillation and stroke will become increasingly important health issues in the Middle East.

Atrial fibrillation causes the heart to beat irregularly and faster than normal and, if medication hasn't worked, the usual procedure for rectification is catheter ablation. This involves correcting abnormal electrical impulses in the heart, using x-rays in combination with 3-D mapping to navigate the catheter.

The downside of the conventional ablation procedure is the exposure to radiation through x-rays, as they are linked to an increased risk of developing cancer in the future. This is particularly relevant when a patient is young, female and of child-bearing age or requires many x-ray guided procedures.

A Different Roadmap

Dr. Ernst explains: "If the patient's heart is otherwise healthy, catheter ablation of atrial fibrillation works with the majority of cases with one treatment. But if a patient has heart disease or the atrial fibrillation is already persistent, then the procedure is less likely to work the first time and a patient may need multiple ablations. This automatically increases their radiation exposure."

To reduce patients' exposure to radiation, Dr. Ernst has developed a new structured approach to catheter ablation of atrial fibrillation. This replaces x-ray navigation with an electro-anatomical mapping system that creates 3-D images showing the catheters within the heart during the procedure. It also displays the transseptal needle used to enter the left side of the patient's heart.

In addition, Dr. Ernst uses 3-D roadmaps from either cardiac magnetic resonance imaging (CMR) or computed tomography (CT) scans. These 3-D roadmaps show the detailed anatomy of the patient's heart and help to locate the catheters during the procedure. The mapping system uses a special catheter equipped with a sensor to allow exact localisation.

Zero or Minimal Radiation

With 3-D mapping, the total radiation time from x-rays can be substantially reduced or completely eliminated. For a growing number of patients who need to undergo an ablation, the exposure to x-ray radiation can be zero, or reduced to just a few seconds.

With this approach, the patient's lifetime 'radiation bill' is not added to with potential harmful radiation, therefore the cancer risk is not increased by the procedure or procedures.

Some patients, however, do need to undergo x-rays for their treatment, for example those with implanted devices such as pacemakers, defibrillators (ICDs) and biventricular devices. Depending on the position of an artificial heart valve, patients with a metallic heart valve may also require navigation using x-rays.

Since 2013, Dr. Ernst has carried out over 60 catheter ablations without using any radiation at all.

How Catheter Ablation with 3D Mapping Works

Dr. Ernst starts by looking at a 3-D image of the patient's heart, gained through CMR imaging. This removes the need for radiation, unless a patient has a contraindication with CMR and requires a CT instead.

To begin the procedure, a small puncture in the groin is made with a special needle, which

Dr. Sabine Ernst

advances the catheter towards the heart, guided by images provided by the 3-D mapping system.

Dr. Ernst explains: "In the left atrium, I treat the entry points, the so-called pulmonary veins, and this reverts the heart to its normal rhythm. Typically, I also perform an ablation in the right atrium for the best outcome."

The procedure has equal success rates whether using x-ray or 3-D mapping systems for navigation. However, the structured 3-D mapping allows many arrhythmias to be treated with zero radiation exposure from x-rays. The approach doesn't increase a patient's cumulative lifetime exposure to x-rays (which can increase the risk of developing cancer later in life).

In both cases, Dr. Ernst says the whole procedure takes between 1.5 and 2 hours. After the patient comes out from under the general anaesthetic, they need six hours' bed rest and have stay overnight in the ward. The next day, the team conducts safety checks, including an echocardiogram, and the patient is free to go home. Patients can return to normal physical activity after 10 days.

Benefits for Patients

The main advantage for patients is a reduction in their x-ray exposure. Dr Ernst says: "It's cumulative – every time a patient has a scan, they up their risk. Anything to reduce this exposure is good for them."

This benefit is particularly important for young women and all female patients of childbearing age. In addition, catheter ablation using zero or minimal radiation is a minimally invasive process, which is an attractive option to females in the Middle East.

Dr. Ernst has a strong appeal to Middle Eastern women who prefer a female consultant in the event they need treatment for a cardiac arrhythmia such as atrial fibrillation. She can also arrange for an all-female team – comprising an anaesthetist, two nurses and two technicians – to work alongside her on the catheter ablation.

Links with the Middle East

Royal Brompton & Harefield Hospitals Specialist Care has a strong and long-established relationship with the Gulf region. The organisation works closely with health authorities including the Dubai Health Authority, Hamad Medical Corporation and the Ministry of Health and Prevention.

Known across the world over for its expertise, standard of care and research success in lung and heart disease, Royal Brompton & Harefield Hospitals Specialist Care operates a visiting doctor programme with key hospitals across the Middle East region. The programme helps to provide better clinical outcomes and strengthen relationships with the region's healthcare providers.

Dr. Ernst says: "The programmes and collaborations in place between Royal Brompton & Harefield Hospitals Specialist Care and hospitals in the Middle East region are there to ensure patients receive the best care while visiting the UK for treatment. Crucially, we also look to ensure that continuation of care is transferred back to the country. It is fundamental to share our knowledge for patients to receive excellent care wherever they are to really make a difference."

Dr. Ernst also plans to cascade specific knowledge of her 3-D mapping approach to catheter ablation across London and Europe in 2019. In the future, she is hopeful this innovative and beneficial approach will be available globally.

Dr. Ernst will be discussing 'Management of arrhythmias in the emergency department' as part of the Emergency Medicine conference, at 09:40.

TODAY AT A GLANCE

ARAB HEALTH 2019 CONGRESS

Conference	ROOM	Location	Start	Finish
Total Radiology	Level 2	Conrad Dubai	08:25	18:00
Obs & Gyne	Level 4	Conrad Dubai	08:20	18:00
Orthopaedics	Abu Dhabi B	1st floor above Rashid Hall, DWTC	08:10	17:30
Surgery	Umm Al Qwain	2nd floor above Rashid Hall, DWTC	08:30	18:00
Emergency Medicine	Ajman D and Fujairah A	Above Hall 7, DWTC	09:10	18:00
Public Health	Dubai C & Dubai D	Above Sheikh Maktoum Hall, DWTC	09:20	17:30
Anaesthesia	Ras Al Khaimah	2nd floor above Rashid Hall, DWTC	09:00	17:35
Quality Management	Al Ain J & Al Ain K	Above Hall 4	08:50	18:00

ARAB HEALTH DAILY DOSE

The Arab Health Daily Dose is the official newspaper of the Arab Health Exhibition & Congress. Distributed Monday 28th - Thursday 30th January 2019.

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Your Guide to Experience Zone

Who doesn't want to take a look at 3D organs or even a full skeleton through the power of Augmented and Virtual Reality? Fancy creating a fun GIF for your kids in our age detecting Smart Mirror or enjoying some friendly competition with our mind control ECR car race?

Then make your way to the Experience Zone being introduced at Arab Health this year, where you can interact with some great tech. Visit Za'abeel Hall 4, stand Z4.H49, to experience the human anatomy VR and the EEG 'mind-control' car!

Innov8 talks.

The Innov8 Talks

Today's theme: Patient Engagement and Monitoring
Location: Plaza Hall, DWTC
Moderator: Dr Homero Rivas, MIS, Digestive and Bariatric Surgeon, Associate Dean of Innovation and Future, Mohammed Bin Rashid University of Medicine and Health Sciences (MBRU)

12:00 ***Keynote: What is AI and how can it benefit health and care***
Mark O'Herlihy, Managing Director, EMEA, IBM Watson Health

15:00 ***AI: Why deep learning is so powerful for medicine in general***
Dr Alvin Liu, Assistant Professor, Ophthalmology, Johns Hopkins Medicine, Baltimore, USA

15:30 ***Using AI to identify patient deterioration for earlier intervention and optimized patient flow***
Karsten Russell Wood, Head, Global Marketing Patient Care Analytics, Philips, Baltimore, USA

16:00 ***Direct2Cloud: a new approach to remote patient monitoring***
Fadi Atteya, Operations Senior Manager, Sapphire HMS
Gilles Lunzenfichter, Vice President of Marketing and Sales, Medisante AG

THE PITCHES

12:30 – 14:30: **This will feature 8 talks, for 8 minutes**

Add Movement: New wheelchair with better accessibility
Ariane Medical Systems: X-Ray brachytherapy system for the management of lower rectal tumours
Bingli: The smart medical interview for a better consultation
CarePassport: An app developed for the patient that focuses on medical imaging and patient engagement solutions
Clinical Design: An easy to use and accurate digital point of care urine test
Brighter: Actiste - connected and convenient diabetes care
Ectosense: Offering innovative sleep disorder care solutions
Remmed: VR therapy for the home treatment of eye problems

THE JURY

- Dr Mohammad Al Redha, Director, The Executive Office for Organizational Transformation, Dubai Health Authority
- Mohamed Hamdy, Head of Venture Capital, Dubai Future Foundation
- Saqr AlHemeiri, Chief Innovation Officer, Ministry of Health and Prevention
- Mubaraka Ibrahim, Director of IT Department, Ministry of Health and Prevention
- Marwan Abdulaziz, Executive Director, Dubai Science Park
- Daniel Amir Raduan, Head of Digital Health, Etisalat
- Akbar Moideen Thumbay, VP – Healthcare Division, Thumbay Group

ARAB HEALTH

مدينة دبي الطبية
Dubai Healthcare City

Business Partner Presentation Zone Schedule*

Session Timings	JAN 28 DAY 1	JAN 29 DAY 2	JAN 30 DAY 3	JAN 31 DAY 4
10:30 - 11:00 am	**DHCC Brief**	**Laser Eye Care & Research Center** **Presentation + Q&A** Dr Anwar Hamdan Sajwani, one of the 'first' Emirati ophthalmologists sharing his experience	**Clinart** **Presentation + Q&A** An overview about the cycle of clinical research from concept development to publication	**Revitalife Compounding Pharmacy** **Presentation + Q&A** Presenting Bioidentical Hormone Replacement Therapy and Revitalife Drip Multivitamins, Minerals and Amino Acids Intravenous Therapy
11:10 - 11:40 am	**DHCC: The Hub for Kidney Transplants in Dubai** **Presentation + Q&A** Showcasing how the free zone has built expertise and capacity in kidney transplantation	**DHCC Brief**	**VAT Awareness Session with tax advisory firm WTS Dhruva**	To mark Dubai Healthcare City's (DHCC) 15th year of participation at Arab Health, we are celebrating business partners who have completed 15 years with us
11:50 - 12:20 pm	**Imperial Healthcare Institute** **Presentation + Q&A** Supra Lasik Treatment, the latest generation of laser eye vision correction	**Memorandum of Understanding signing** Visiting Doctor's License	**VAT Awareness Session with tax advisory firm WTS Dhruva (continued)**	**Al Jalila Children's Speciality Hospital** **Presentation + Q&A** Showcasing the mental health day care program
12:30 - 01:00 pm	**Dubai Dental Hospital Launch**	**DHCC Telehealth Launch + Memorandum of Understanding signing with Getbee**	**Patient Safety Pledge launch + Memorandum of Understanding signing**	**Dubai Healthcare City - Medical** **Presentation + Q&A** Showcasing the Automated External Defibrillator (AED) installation across the free zone
01:10 - 01:40 pm	**American Spine Center** **Presentation + Q&A** Successful non-invasive treatment for acute disc herniation cases	**DHCC Telehealth Launch + Memorandum of Understanding signing with Getbee (continued)**	**CryoSave Arabia** **Presentation + Q&A** The region's largest stem cell laboratory offering a unique program designed to give access to stem cell banking for families in need.	**Merrimac Dialysis Center** **Presentation + Q&A** A CSR initiative to provide dialysis for people in need.
01:50 - 02:20 pm	**Cochlear Middle East** **Interactive Session** Nucleus® 7 cochlear implants that can now be connected to your smart phone	**Bioscience Clinic** **Presentation + Live Stream** The only UAE Ministry of Health and Prevention approved certified cells factory	**Igenomix** **Presentation + Q&A** A leading company in reproductive genetics, showcasing Endometrial Receptivity Analysis, and NACE prenatal testing (non-invasive)	**Okadoc** **Presentation + Q&A** Insights into patients' preference for healthcare technology
02:30 - 03:00 pm	**DHCC - Okadoc** Live Appointment System introduction + Memorandum of Understanding signing	**Emirates Specialty Hospital and Hasan Surgery** **Discussion** Our partners talk about the use of stem cells in their treatment plans	**American Academy of Cosmetic Surgery Hospital** **Presentation + Q&A** Showcasing newly-introduced biological treatments	**DHCC: The Hub for Kidney Transplants in Dubai (Repeat session)** **Presentation + Q&A** Showcasing how the free zone has built expertise and capacity in kidney transplantation
03:10 - 03:40 pm	**Moorfields Eye Hospital Dubai** **Presentation + Q&A** Showcase of Opmi Lumera microscope and Optical Coherence Tomography (OCT)	**Mediclinic City Hospital** **Presentation + Q&A** Showcasing the Comprehensive Cancer Centre (CCC), an advanced facility for the diagnosis and treatment of cancer	**Dr Sulaiman Al Habib Hospital** Epilepsy Monitoring Unit	**BR Medical Suites** **Presentation + Q&A** Patient success stories with sinus surgery using a navigation system
03:50 - 04:20 pm	**American Heart Association: Adult and Child CPR** **Interactive Session*** Learn the core skills of Cardiopulmonary Resuscitation (CPR) in just 20 minutes * Anytime Personal Learning Kit included	**DHCC: The Hub for Kidney Transplants in Dubai (Repeat session)** **Presentation + Q&A** Showcasing how the free zone has built expertise and capacity in kidney transplantation	**London Sleep Center** **Presentation + Q&A** Only center in Dubai providing Integrated Dental Sleep Medicine services	**Emirates Specialty Hospital** **Presentation + Q&A** Esophageal Resections and Replacement
04:30 - 05:00 pm	**Emirates Specialty Hospital** **Presentation + Q&A** DTRAX- the first minimal invasive intervention for permanent treatment of chronic neck pain and cervical disc in Dubai	**American Heart Association** **Presentation + Q&A** Showcasing the Resuscitation Quality Improvement Program (RQI)®	**Mohammed Bin Rashid University of Medicine and Health Sciences Student Research** **Presentation + Q&A** Showcasing biomedical, clinical, public health, and medical education student research	**DHCC Brief**

*Subject to change

Visit DHCC, Hall 6, Stand 30

Asia Health: Hub for the World's Fastest Growing Healthcare Market

By Daily Dose Staff

With the rising burden of diseases, favourable government policies in the Asia-Pacific and the presence of strong developing economies in India, China and other countries in the region, companies are flocking to develop their presence and expand across the APAC.

This is where Asia Health, one of the leading medical products, services, and technology exhibition and congress, plays a key role. The free-to-attend event is set to take place at the Suntec Singapore Convention Centre, Singapore, from March 26 to 28 and brings together healthcare professionals from across the world. The event is well-known for being a must-attend exhibition for those who value the power of learning, networking, and doing business.

Asia Health is organised by Informa Exhibitions – Healthcare, the organisers of Arab Health, one of the largest healthcare exhibition and congress in the Middle East.

Offering over 200 product categories from 20 exhibiting countries and eight international pavilions, Asia Health is a one-stop-shop for all healthcare sourcing and procurement needs. Furthermore, accompanying the exhibition are a number of business, leadership and Continuing Medical Education (CME) conferences and forums providing the very latest updates and insights in Patient Safety, Oncology, and Healthcare Procurement.

This year, GE is a platinum sponsor of the event and will be highlighting its latest research in developing and improving cancer care at the Oncology conference. GE is well-known for its innovative solutions for oncology and supports cancer centers and hospitals through advanced medical technologies, providing physicians and technicians with greater clinical insights. Over the years, the company's solutions have helped improve the development of cell therapies, including CAR-T cell therapy. From stem cell recovery through separation and modification to expansion, harvesting, and testing, its functionally-closed systems and single-use solutions enable end-to-end production of cell therapies.

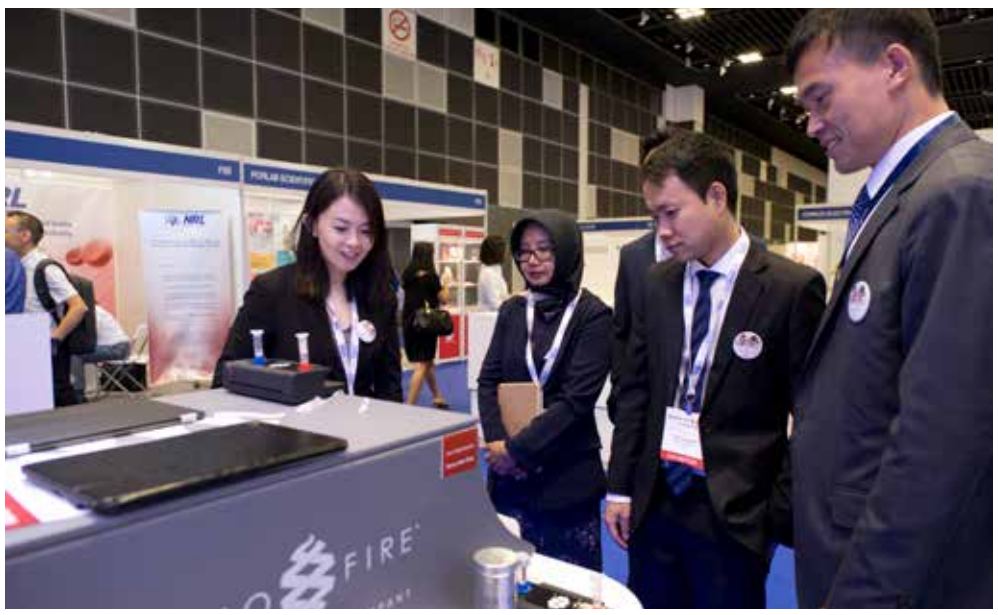
Plus, the Patient Safety Congress is being introduced at the event this year. Some of the key topics it will cover include reviewing the latest International Patient Safety Goals (IPSGs) and ways to implement them in the local medical practice setting; identifying strategies to achieve high-value health care to deliver top-tier quality service at the lowest cost, and identifying comprehensive solutions that ensure patient safety, risk, and quality activities are aligned with the strategic goals of the organisation.

As part of the congress, on March 26, the Patient Safety & Quality Conference will take place with the theme, 'Consolidating efforts to improve patient safety: leadership, technology and finance'. While on March 27, the Sterilisation & Decontamination Conference will take place, and the Antimicrobial Resistance Conference will be held on March 28. These CME-accredited conferences will provide key insights into quality patient care and safety management in the healthcare setting.

The congress will also assess the current roles in patient safety to clarify responsibilities and reduce duplication of effort and discuss technology use to coordinate and streamline process changes, data collection, data analysis, monitoring, and evaluation.

The event will be co-located with MEDLAB Asia Pacific, which is in its sixth edition this year, and is one of Southeast Asia's premier international laboratory exhibitions. The 2019 edition of the event will host 15 CME-accredited conferences, eight international pavilions, over 200 product categories, and more than 250 exhibitors.

With its different features, the show is definitely a must-visit for those looking for the latest products or distribution partnerships, or for those hoping to expand their knowledge and engage in networking. ***For more information visit www.asiahealthexhibition.com***



Canon Medical Launch New Aquilion Start CT System

Article provided by Canon Medical

Canon Medical Systems Corporation launched the new Aquilion Start CT system, at the show. Featuring technologies based on Canon Medical's industry-leading Aquilion family, the new Aquilion Start will bring high-quality imaging technology to healthcare institutions in settings where their patients previously did not have access to a diagnostic CT scan.

Healthcare institutions face the challenge to balance budgetary pressures and spiraling costs with an increasing demand from the public to provide high-quality care that incorporates the latest technological advances. For many patients, especially in emerging countries, routine diagnostic CT imaging necessitates a long trip to a hospital. The Aquilion Start with the smallest installation footprint in its class, affordable total cost-of-ownership and economical running costs, brings the opportunity for more medical institutions to invest in CT and extend their radiology imaging capabilities. For the patient, the next diagnostic scan may be a short trip to a nearby clinic.

Built around the needs of the patient and the clinician, Aquilion Start's design incorporates a spacious gantry to allow for comfortable scanning of even the largest patients. Intuitive controls and increased automation help clinical staff quickly familiarize themselves with system operation and advanced technologies inherited from premium CT systems, optimize patient safety, accelerate clinical decision-making and prioritize workflow efficiency.

"Improving life for all lies at the heart of everything we do," said Canon Medical President and CEO, Toshio Takiguchi. "The Aquilion Start realizes our vision to support more medical institutions to deliver quality care. This continues in the Aquilion tradition to deliver an exceptional patient experience, without compromise on comfort, safety or quality of diagnosis."

The Aquilion Start is featured at Canon Medical's booth (S1.D30).

Committed to Better Breast Health

Article provided by iBreastExam

Breast cancer is the most common cancer in women worldwide and the same is true for women in the UAE. Breast cancer is highly treatable when detected early. However, by the time symptoms present, it's often too late; most women are diagnosed late.

iBreastExam (iBE) is an innovative, handheld medical device designed to provide a quick, painless and radiation-free breast exam at the point-of-care, with instant results. It is meant to be used by community health workers, nurses and allied health professionals in primary care centres, gynaecology clinics and women's health providers as a pre-screening tool.

With a commitment to bring down cancer fatalities by nearly 18 per cent by 2021, the UAE is taking the challenge of cancer detection head-on. In fact, reducing the number of deaths due to cancer is one of the key performance indicators of the pillar of world-class healthcare of the UAE National Agenda.

Bhaumik Sanghvi, UE LifeSciences' Chief Operating Officer, said: "We are very excited to bring this technology to the women in the Middle East! It's for healthy women, before symptoms of breast cancer appear. Breast tumours are hard, like a seed inside the lemon. Our patented ceramic sensors in iBE measure tissue elasticity in real-time by converting mechanical pressure into electrical signals. For women, it feels like a stethoscope on the breasts. It's a quick and easy test."

Over 200,000 women have taken the iBreastExam test in over 12 countries. The device has received commercial market clearance by regulatory authorities in the U.S. (US FDA), Europe (CE Mark), Mexico (COFEPRIS), India and several Southeast Asian countries. In various clinical studies, over 10,000 women have been enrolled to study iBreastExam extensively. iBE has demonstrated sensitivity of 84 per cent, specificity of 94 per cent and negative predictive value of 98%.

iBreastExam recently launched commercially in Oman with the support of Oman Health Ministry and Oman Cancer Society, and the next stop is the UAE. UE LifeSciences is in talks with major providers and seeking collaborations with clinics, diagnostics and hospital players, and the government.

"We are an innovation led U.S. company with a global DNA" said Prof. Matthew Campisi, UE LifeSciences' Co-founder and Chief Technology Officer. "With devices that are on the ground and projects that are ongoing already, over 1 million women will soon receive a much needed, safe, effective and affordable breast exam. For most women it will be for the very first time," said Prof. Campisi.

iBreastExam has also won several international innovation awards and over $1.6M in grant funding from the Bayer Cares Foundation, Pfizer Foundation and the Pennsylvania Department of Health.

The product is being showcased at Booth# H1.C31 in the U.S. Pavilion.

Transformation of Healthcare Delivery in the Middle East

Medical technology and integrated care offer new solutions to the region's changing healthcare landscape

Article provided by Medtronic

With healthcare providers across the region under pressure to be more efficient, much of the attention is now focused towards the growth capabilities that drive healthcare innovation and progress. The evident changes in the healthcare space – slowed healthcare spending, healthcare consumerism, and application of healthcare IT - means that organisations are forced to anticipate change by responding with meaningful innovations at the therapy, procedural, and organisational levels to market. Advances in medical technology and the adoption of integrated care models are increasingly being utilised to streamline healthcare systems with the potential to transform the way healthcare is delivered across the Middle East.

At the cutting-edge of medical technology, developments in robotic-assisted surgery are forging new frontiers in the healthcare delivery continuum. Medical device innovation on this level is seen to offer better patient outcomes while maintaining or reducing overall costs and, with a number of medtech giants announcing new product launches in the global robotic-assisted surgery market, this trend is set to continue.

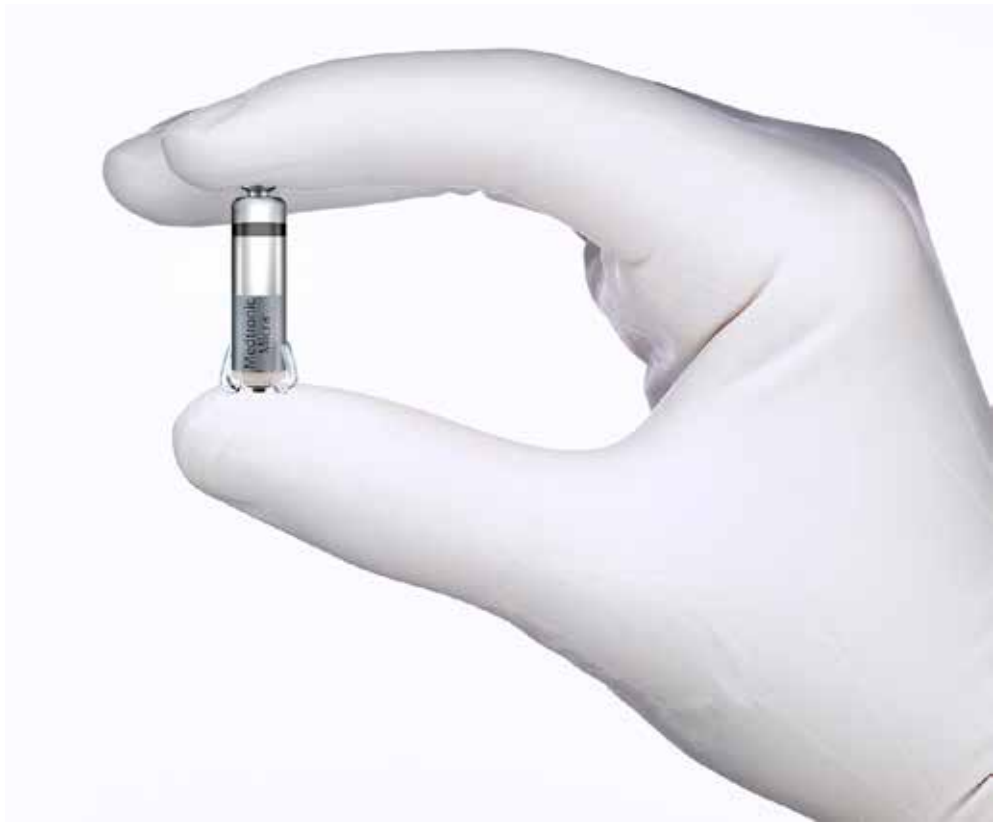
Medtronic plc, the Dublin-based medical technology, services and solutions company, recently released information about its much-anticipated robotics platform. The flexible platform will be used initially in bariatric, thoracic, colorectal, urology and general procedures. As Majid Kaddoumi, Vice President and Managing Director for Central & Eastern Europe, Middle East and Africa region, Medtronic explains, "This year alone we have invested $1.6 billion in research and development to bring innovations that deliver better patient outcomes at appropriate costs, lead to enhanced quality of life, and can be validated by clinical and economic evidence. We hope that our breakthrough innovations such as our robotics platform will redefine the standard of care in markets such as here in the Middle East."

Another of Medtronic's breakthrough innovations includes the world's smallest pacemaker, the Medtronic Micra. A game changer at less than one-tenth the size of traditional pacemakers, and comparable in size to a large vitamin, the Micra TPS provides the most advanced pacing technology available while being cosmetically invisible and small enough to be delivered with minimally invasive techniques through a catheter, and implanted directly into the heart. Micra is the result of a ten-year program at Medtronic called "deep miniaturization" with a goal to shrink medical devices by up to 90%. Scientists, engineers and designers at the medtech giant succeeded in this goal by figuring out how to make a new generation of tiny devices that use only a fraction of the energy they once did. Micra is among the first of those new devices to reach patients.

"While our mission to alleviate pain, restore health, and extend life for people around the world has remained the same during the six decades of our existence, the nature of today's healthcare problems requires a new approach," Kaddoumi adds. "The healthcare providers don't just need clinical value from our therapy innovations; they needed economic value as well. By forging new, different, and stronger partnerships, we are able to continue to drive progress in innovation and devise powerful solutions with proven clinical and economic value as the basis of our offerings and value proposition."

The future of healthcare in the Middle East requires that both healthcare providers and medical technology companies embark on sustainable, innovative models of healthcare delivery. Although medical technology innovations such as the world's smallest pacemaker and the Medtronic robotics platform are shown to facilitate better outcomes, representing smarter spending, it is clear that stronger partnerships that allow for value-based care will also be needed to deliver more seamless, integrated care across the healthcare continuum.

Medtronic
Further, Together



Leveraging Tech to Enhance Patient Experience

By Deepa Narwani, Editor

With more than 50 years of experience in hospital environments worldwide, Honeywell is a global leader in connected healthcare. The company has a long history in the Middle East, where it has leveraged advanced software solutions and Internet of Things (IoT) technology to deliver 'Connected Hospital,' 'Connected Clinician,' and 'Connected Patient' initiatives.

Miroslav Kafedzhiev, Vice President and General Manager, of Honeywell Safety & Productivity Solutions (SPS) for Middle East, Turkey, Central Asia and Africa (META) told *Daily Dose*: "Integrating infrastructure and disparate systems to enable better care, Honeywell works with state-of-the-art healthcare facilities across the region to ensure the rapid flow of information for more agile operations. The company also specialises in workflow automation and communications to help reduce errors and increase productivity for clinicians, while improving the health of patients through effective monitoring in the hospital and beyond."

Recently, the company implemented an advanced infant tracking solution at a large private hospital in the Middle East. The system provides a special service level to parents who want to track the identity, activity and movement of their newborn babies, to ensure the highest level of safety and care.

Kafedzhiev said: "Advancement in software and mobility technology has helped enhance patient care and healthcare delivery in a big way. The region is witnessing a lot of demand with regards to healthcare innovation, owing to several factors, including a rise in chronic diseases, increase in medical tourism demand and a swift shift towards digital transformation. Hospitals are tasked with doing more, which means leveraging the latest technology to provide the best quality patient care and ensuring an excellent patient experience.

"Experts and healthcare professionals are exploring ways in which blockchain and Artificial Intelligence (AI) can contribute to better care. We have already started to see positive signs of what is to come with these new technologies and believe that they can go a long way in improving everything from workflow automation and asset tracking, to facilitating more efficient clinical operations."

The GCC healthcare market is growing rapidly and is expected to reach US$ 94 billion in 2021, witnessing a considerable growth of 8.7 per cent annually from 62 billion in 2016, according to a recent report by MENA Research Partners (MRP). According to Kafedzhiev, the UAE healthcare industry, specifically, has evolved rapidly in the last few years, fuelled by technological innovations as well as huge investments by the government. With the government heavily focusing on tapping into medical tourism and becoming the regional hub for healthcare, he foresees continued growth in the sector.

"We anticipate data analytics to continue to be a major trend in the industry, with it being leveraged to provide better services to customers at every touch point," he emphasised. "Hospitals and clinics will also continue to provide customised experiences to patients, while creating a comprehensive range of online services for them to choose from. These trends will not only ensure improved workflows, and streamlined processes, but will drive further growth of the sector."

Kafedzhiev concluded: "Quality healthcare is vital for a prosperous society, and we are committed to supporting healthcare providers in their quest to provide superior care to patients. We continue to be focused on delivering advanced hardware and software solutions that ensure enhanced patient care and experience, higher clinical value and more operational efficiency, which all contribute to the continued transformation of the healthcare industry."

Honeywell (located at Z3.B09) is showcasing its Intelligent Lifecare Systevo portfolio that integrates nursing workflows, clinical communication, mobility and care specific apps to ensure a smooth patient experience. Other technologies include high-performance specialty equipment, such as printers, barcode scanners and wristbands, aimed at improving patient safety and driving productivity across the hospital.

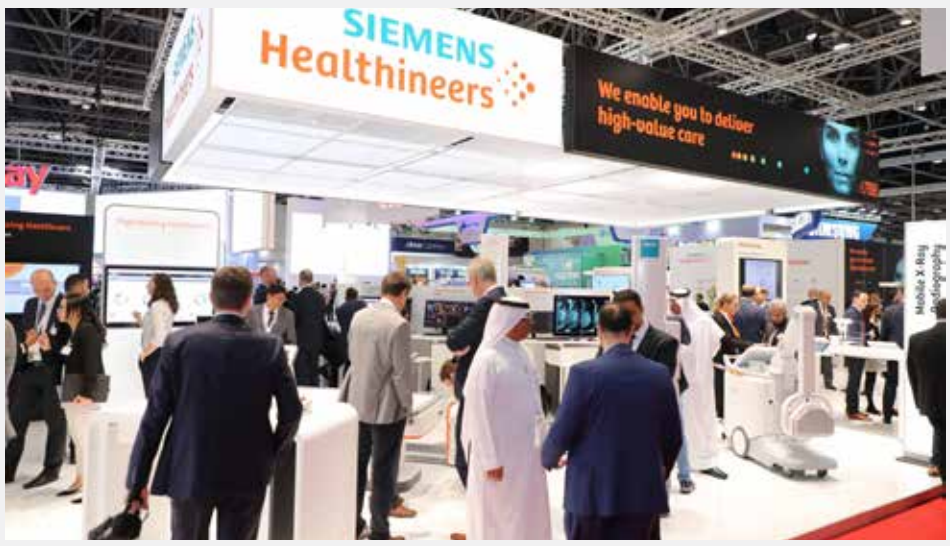
Siemens Healthineers Presents Suite of AI-Powered Tools

Article provided by Siemens Healthineers

At the show, Siemens Healthineers is showcasing its products and solutions following the motto "We enable you to deliver high-value care". All of the company's innovations are designed to enable healthcare providers worldwide to increase value by empowering them on their journey towards expanding precision medicine, transforming care delivery, improving patient experience and digitalizing healthcare. With its long-standing presence in the Middle East and intelligent, forward-looking, and AI-powered solutions that capitalize on the ever-increasing volume of healthcare data and translate it into concrete clinical, operational, and financial wins, Siemens Healthineers can be the trusted digitalization partner for the entire region.

The company is showcasing the AI-Rad Companion Chest CT, a software assistant that brings artificial intelligence (AI) to computed tomography (CT). It is also highlighting the AI-Pathway Companion, a clinical decision support system based on artificial intelligence that supports physicians in making diagnostic and therapeutic decisions along the clinical pathway. While numerous applications in the healthcare market make the workflows of individual clinical or administrative departments more efficient, the AI-Pathway Companion is designed to help optimize the processes along clinical pathways and thus support personalized as well as standardized patient management.

The company is showcasing these solutions at Sheikh Saeed Hall 1, Booth #S1.D10.



100 Mentors Programme Hosts DHA Director General

Article provided by Dubai Health Authority

His Excellency Humaid Al Qutami, Director General of the Dubai Health Authority (DHA)

The 100 Mentors programme hosted His Excellency Humaid Al Qutami, Director General of the Dubai Health Authority (DHA) to discuss some key values and traits, which will help the youth of the country achieve success and wellbeing.

The session took place at the Dubai Health Forum, which concluded last week.

The 100 Mentors is a programme organised by the Emirates Youth Council, and it aims to connect the youth with role models in both the private and government industries.

Al Qutami said, "The youth have several opportunities to carry forward the success of this nation. The UAE has developed and flourished due to our wise leadership and the establishment of the Youth Council reinforces the belief that the leadership has in the capabilities of our youth. Our youth is our future and they have to continue the path of success and development. I want to address the youth by telling them about some of the values that they need to foster and implement in their life and their workplace to continue the path of success that our leaders have provided us.

"I have been greatly inspired by key concepts presented in the book *Qessaty*, (My Story) penned by His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of UAE and Ruler of Dubai. I shall present some of these concepts to the youth, which can be incorporated as key values in their day-to-day life.

"I have worked across several sectors, but these key traits are useful in all sectors and in life in general, therefore they must be fostered at a young age.

"Firstly, training and development lay the foundation for developing our youth. Fostering a lifelong love for learning is a key trait for success.

"I strongly believe in the importance of teamwork. I also recommend that you master your work, you will make mistakes along the way and those mistakes will be life-lessons later on. I also recommend identifying a mentor who can guide you and help you grow as you step into your career.

Al Qutami said setting a plan is very important. "In order to be meticulous and avoid errors, set a proper plan to serve your goals. Of course, plans do not work unless you execute them with relentless efforts and dedication."

Al Qutami urged the youth to be as professional as possible.

He spoke in detail about the need to innovate. "Don't follow the path that has always been followed if you believe that change is required. The world is constantly changing and evolving, and we need to be open to doing things in a new way. Be creative. His Highness Sheikh Mohammed bin Rashid has always emphasised on the importance of innovation, calling it a way of life. Seek inspiration from this."

Al Qutami spoke of the importance of commitment and discipline in every area of life and not just work. He also asked the youth to keep track of their path. "Observe yourself. Ask yourself, are you working to the best of your abilities? How can you get better?"

"Finally, I would like to highlight the importance of communication. HH Sheikh Mohammed bin Rashid has always emphasised that the purpose of the government is to serve the people, the purpose of a government job is to serve the community and the purpose of laws and regulations is to serve humans. When you step into your jobs, you will realise that in order to serve people you need to listen to them, you need to understand their needs and their demands. You need to create bridges of communication. Clear communication channels help you in all areas of live, not only work.

"Finally, be committed and driven," said Al Qutami.

Clinical Design Launches Digital Urine Test

Article provided by Clinical Design

One of the world's most hygienic, easy-to-use and accurate digital point-of-care urine test is being launched at the show by UK company, Clinical Design.

The Urine Testing System has been designed to improve the entire process from receiving the sample and recording results, to analysis in the laboratory.

The intuitive system features sealed, leak-proof samples, automatically-timed readings and the ability to save digital results directly into the patient's electronic health record.

No decanting is required, reducing the risk of contamination and false positive samples being sent to laboratories. Digital readings are also more accurate compared to manual urinalysis as they eliminate variation in subjective analysis and the risk of error during manual recording.

Urine Testing System works seamlessly as a closed integrated system and includes a patented, single-use cap containing reagent pads to test ten parameters: leukocytes, nitrite, urobilinogen, protein, pH, blood, specific gravity, ketone, bilirubin and glucose.

Once the patient has collected the urine sample, the healthcare professional simply connects UTS-10 Cap; creating a sealed, leak-proof module. This UTS module is then loaded into the UTS Digital Analyser and the automatically-timed, digital results are shown on the integrated LCD screen or in the UTS Desktop Software if connected to a computer.

The sample can be disposed of in clinical waste or be sent to the laboratory with no need to decant. It is specially designed to fit in standard laboratory racking – and can be purchased with or without boric acid depending on laboratory requirements.

Oliver Blackwell, CEO of Clinical Design, said: "We have developed a simple integrated system that increases the efficacy of patient point-of-care urine testing and improves first-time diagnosis. It is the only closed urine testing system available anywhere in the world and we are delighted to be able to showcase it at Arab Health 2019."

Point-of-care testing is an ever-increasing area of healthcare for doctors and healthcare professionals globally. Globally, it is estimated that 2.8 billion point-of-care urine tests are carried out for things such as the diagnoses of acute infections, monitoring kidney and liver disease, as well as diabetes.

The current test takes approximately one to two minutes and risks include spillage of a contaminated sample, as well as human errors during analysis and/or the manual recording into a patient's records.

Clinical Design are also presenting their Urine Testing System at the Innov8 Talks, under the theme 'Patient Engagement and Monitoring', today between 12:30 – 14:30.

The Promise of Artificial Intelligence

Q&A with Retina Specialist T.Y. Alvin Liu, M.D.

Article provided by Johns Hopkins Medicine

T. Y. Alvin Liu, M.D. is an assistant professor of ophthalmology at the Wilmer Eye Institute, Johns Hopkins Medicine. He is subspecialty-trained in the medical and surgical treatment of vitreoretinal diseases, including diseases such as retinal detachment, macular holes, diabetic retinopathy, vein occlusions and age-related macular degeneration. Dr. Liu's research interests center on the application of artificial intelligence in the screening, diagnosis, prognostication and treatment of ophthalmic diseases.

As a retina specialist, what influenced your career path?

I have been interested in the retina since I was in medical school. It is a very special part of our body. The retina is one of the few places, where one can visualise the blood vessels non-invasively. Moreover, the retina is actually part of the brain.

Being an avid photographer, I have always thought of the retina as the film in a camera. As you know, if the film doesn't work, the camera will not work, so I think having a healthy retina is crucial for giving someone useful, sharp vision.

Your research interests include artificial intelligence. How does ophthalmology benefit from artificial intelligence?

Artificial intelligence (AI), in the form of deep learning, is exceptionally adept at medical image classification. However, deep learning usually requires a tremendous amount of data input for training. Ophthalmology, especially retina, has been better-positioned to take advantage of the recent advances in artificial intelligence, as compared to other medical fields, due to the availability of well-annotated, large image datasets.

Currently, most of the published works in the application of AI in medical image analysis pertains to making disease diagnosis and implementation of algorithms in a screening context. For example, computer algorithms have been developed to automatically determine, without any human input, which diabetic patients should be seen by an ophthalmologist for diabetic retinopathy. This has the potential to dramatically streamline the workflow and improve efficiency.

Eventually, we would like to develop algorithms that can make accurate predictions regarding disease progression or response to treatments. Also, most of the current datasets and algorithms can only handle 2D images from one imaging modality, such as a color photograph. Eventually, algorithms will be able to analyse 3D images, or images generated from different modalities simultaneously.

What do you envision will be the future benefit of artificial intelligence?

I am a futurist and optimist. I believe and hope AI will completely transform and improve our society in the near future. For example, currently a deep learning-based algorithm can predict with high accuracy a person's gender, age and blood pressure just from a single retinal color photograph. This is clearly "super-human" intelligence, though in a very narrow sense. Considering we are only at the infancy of AI application in medicine, I can't wait to see what AI can do in 10, 20, or 30 years!

Dr. Liu will be speaking about 'AI: Why deep learning is so powerful for medicine in general' at the Innov8 Talks, at 15:00.

Ampronix:
Bringing Cutting-Edge Medical Technology to the Forefront

Article provided by Ampronix

U.S.-based Ampronix currently sells to 131 countries and delivers customer-centric solutions tailored to meet the unique needs of your medical environment. They bridge the gap in products and services with a full spectrum of universal imaging peripherals designed to comply with all major brands.

The medical industry hasn't set universal standards for medical grade displays, making the replacement of CRTs with new flat panels, a problematic challenge regarding compatibility with legacy modalities. Video signals from modalities are unique and entirely different from IT and video production displays. Transitioning from a CRT to a flat panel, causes a new set of requirements to rise. New flat panel medical displays are expected to have a more realistic and brighter resolution, lower power consumption, no radiation, fewer repairs than CRTs, low cost of ownership, longer lifespan, less weight and most importantly, compatibility with all modalities.

There aren't too many manufacturers that have been able to develop a flat panel display that meets all of the requirements, yet all of Ampronix Medical products do. Ampronix's Modalixx™ LED Displays, are a universal solution that's compatible with Cath Lab, MRI, CT, RF rooms, Mobile C-Arm, Computed Radiography (CR), PET scanner, as well as Nuclear Medicine modalities and capable of receiving any video signal parameter.

In particular, the Modalixx™ G202MDL 20.1 Inch Grayscale LED Display is the ultimate grayscale High Bright medical LCD solution for modality CRT monitor replacement. The display will auto-sync to any legacy grayscale or color analog modality and up-scales it to clear, sharp, and vivid high bright 2-megapixel resolution. Replacing CRT to LCD is made simpler with the G202MDL covering Cath Lab, MRI, CT, RF rooms, C-Arm, and Portable X-Ray, applications. The display supports up to 120 HZ frequency and is armed with a complete set of input options, making it compatible with nearly all medical modality applications.

Ampronix's Modalixx™ GC8MDL 20.1 Inch Modality Display also makes replacing grayscale and color legacy modalities such as Medical CRT monitors to LCDs just as easy. This display series is compatible with a variety of manufacturers including GE, Siemens, Toshiba, Shimadzu, Philips, and other modalities allowing professionals to upscale videos to HD, high luminance 2-megapixel resolution. Modalixx™ is setting a new universal standard in medical imaging technology. Modalixx display series are compatible with many manufacturers such as GE, Siemens, Toshiba, Shimadzu, Philips, and other modalities.

In addition to Ampronix's Modality Displays, the Medvix Surgical Display Monitors deliver innovative features and benefits for even the most fast-paced and demanding hospitals. All Medvix products include the latest technologies to create a dependable, consistent and cost-effective way to assist in surgical and endoscopic procedures.

The surgical LCDs consist of an antibacterial-treated display enclosure, preventing biodeterioration or odor on display. Its combined unsurpassed clarity and lightweight design include the latest technologies to create a reliable and cost-effective way to assist in surgical and endoscopic applications.

The 26 Inch Medvix AMVX2608HD Surgical Display features a 2-megapixel LED (1920 X 1080) resolution and is purposely designed for the operating room. It provides the best-detailed images for any surgical suite. The long-lasting display has an easy-clean design with a sealed front to allow for simple disinfecting. It is also equipped with a front sealed active matrix TFT-LCD display and an antibacterial-treated enclosure, which prevents biodeterioration for an optimum picture.

All of Ampronix medical products consist of medical grade materials and are made to last through years of everyday use. Ampronix is a world-class manufacturer of innovative technology and renowned authorized reseller of the medical industry's top brands since 1982.

Ampronix will be showcasing the latest 4K 3D Medical Displays, Recorders, Printers, Portable Ultrasound Machines, Cameras, and Scan Converters at Arab Health at their booth in Hall 1 / H19.

For more information please contact us at contact@ampronix.com or visit www.Ampronix.com.

Schoen Clinic Showcases New Hospital

Article provided by Schoen Clinic

Schoen Clinic one of the largest family-run hospital groups in Germany, is present at the show to highlight its first purpose-built hospital outside of its home country.

Schoen Clinic London, located within the Harley Street Medical Area, will provide patients with access to rapid assessment and expert diagnosis from leading orthopaedic surgeons, as well as the Group's award-winning approach to quality outcome measurement.

The hospital contains 10 consultation rooms, two minor treatment rooms, a physiotherapy department with gym and a fully-equipped imaging suite with MRI, CT and digital x-ray.

For inpatients, the seven-floor building also includes three laminar flow theatres, eight bespoke day beds and 39 ensuite inpatient bedrooms, including a VIP suite with roof terrace and private access, as well as 24/7 access to an onsite Resident Consultant Intensivist.

Christopher Schön, chief operating officer of Schoen Clinic Group, said, "The opening of Schoen Clinic London is a hugely important milestone and we are extremely excited to showcase our state-of-the-art facility at Arab Health.

"Our facilities are combined with world-leading healthcare professionals and we are committed to constant improvement. This means patients from across the Middle East visiting us in London will be receiving the best orthopaedic care available, anywhere."

The Schoen Clinic team will be located on the Harley Street Medical Area Stand on the UK Pavilion (Hall 7, Stand E30).

International Consensus Statement on Postoperative Anemia Management Recommends Noninvasive Hemoglobin Measurement Including Masimo SpHb®

Article provided by Masimo

A new consensus statement on postoperative anemia management was published in Anaesthesia by an international panel of clinicians specializing in patient blood management, which includes clear guidance on the use and benefits of noninvasive hemoglobin measurement.[1] The statement, which discusses both spot-check and continuous measurement, references the Masimo Rad-67™ Pulse CO-Oximeter®, a spot-check device that measures noninvasive hemoglobin using Masimo SpHb®, as the example of noninvasive measurement.

The statement notes in part that, "The use of non-invasive continuous haemoglobin monitoring devices instead of phlebotomy may reduce blood loss, pain and discomfort for the patient, but concerns about precision limit routine clinical use. Although the debate focuses on accuracy of a single check, the reliability of non-invasive haemoglobin monitoring devices for dynamic changes over time may permit detection of occult bleeding and response to therapy."

In addition to this newest consensus statement, SpHb has recently received positive recognition from two other reputable institutions in the European anesthesiology community. Both the 2017 European Society of Anaesthesiology's (ESA) Guidelines for the Management of Severe Perioperative Bleeding[2] and the 2017 Italian Ministry of Health's Blood Management Program Guidelines[3] included noninvasive and continuous SpHb as a recommended tool for monitoring hemoglobin. Specifically, the ESA guidelines provided a strong recommendation that "continuous haemoglobin monitoring can be used as a trend monitor."

SpHb is available on a variety of Masimo noninvasive spot-check and continuous monitoring devices, both portable and bedside, as well as through licensed third-party devices. For continuous monitoring, these include Masimo's Rad-97™, Radical-7®, and Radius-7®. Noninvasive and continuous hemoglobin (SpHb) monitoring helps automate the patient's hemoglobin status and provides real-time visibility to changes – or lack of changes – in hemoglobin between invasive blood samples. For spot-check SpHb measurement, Masimo Pronto® is available in addition to Rad-67. Next Generation SpHb, available on these devices outside the U.S., significantly advances noninvasive hemoglobin spot-checking with improved motion tolerance, faster time to display SpHb results, and enhanced field performance in low hemoglobin ranges.

Joe Kiani, Founder and CEO of Masimo, said, "We are happy to see growing recognition, from some of the world's most renowned clinicians, institutions, and advisory bodies, of the utility and benefits of our noninvasive hemoglobin measurement technology. Studies on three continents have shown that continuous SpHb monitoring optimizes blood transfusion[4-6] and in a trial with over 3,000 patients, continuous SpHb and PVi® were shown to reduce mortality 30 and 90 days after surgery.[7] Never content, we continue to refine and improve SpHb and PVi, and look forward to bringing the advantages of Next Generation SpHb to additional markets and devices soon."

Rad-67 with Next Generation SpHb has not received FDA clearance and is not available in the U.S.

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Masimo Rad-67™ with SpHb

Aster Pharmacy is Official Happiness Partner

Article provided by Aster Pharmacy

Aster Pharmacy has announced a series of events as Official Happiness Partner of the show.

Dr. Azad Moopen, Founder Chairman & Managing Director, Aster DM Healthcare commented, "Supporting the visionary ideas of the benevolent rulers of UAE, happiness remains at the core of everything we do. With a commitment to creating a healthier and happier society, we are proud to be the Happiness Partner at Arab Health."

A variety of healthcare awareness activities including those based on Virtual Reality (VR) will be hosted at the Aster Pharmacy pavilion that is located at the main concourse stall no. CC 70. Visitors who participate in these the happiness-focused activities will get stamps on the Aster Passport along with a specially curated 'box of happiness'.

Highlighting the growing role of tech to help manage phobias and irrational fears, visitors will be encouraged to select themes such as stress and nicotine addiction to appear as competitors in a VR gaming environment. Users are then encouraged by the Aster mascot to 'punch' their addictions away.

Among other experiences, the participant chooses a happiness goal and starts pedaling towards it in a setting that utilises terrain options on stationary exercise bike, imposed against a health mirror showing the user's health indicators. The pavilion will also host a BATAK reaction test machine that pushes users to put out as many lights as possible, the lights appearing quite randomly on the grid.

"Connectivity is Critical to Providing Quality Healthcare"

Interview with Hisham Hout, President – Middle East, Africa, Turkey and Indian Subcontinent, Hill-Rom

According to Hisham Hout, President – Middle East, Africa, Turkey and Indian Subcontinent, Hill-Rom, Arab Health is where companies connect with caregivers and showcase the latest innovations to help them enhance outcomes for patients in such areas as Advancing Mobility, Wound Care and Prevention, Patient Monitoring and Diagnostics, Surgical Safety and Efficiency, and Respiratory Health. He says: "At a more micro level, it's about strengthening our relationships with customers and potential customers in a growing region where we continue to see excitement for our technologies." Excerpts from the interview.

What new solutions is Hill-Rom bringing to the caregivers and hospitals this year at Arab Health?

The most significant new product we're exhibiting at Arab Health 2019 is the Centrella® Smart+ Bed. Centrella is a new medical-surgical bed solution for hospitals that offers optimized patient safety, enhanced patient satisfaction and advanced caregiver-focused technology.

Could you please tell us more about Centrella bed and how it is different from other beds?

The Centrella Smart+ bed has advanced verbal and visual notifications – the first of their kind. To further enhance caregivers' ability to ensure their patients' safety and satisfaction, the Centrella Smart+ bed also integrates Hill-Rom's advanced NaviCare® Patient Safety application, and now includes contact-free continuous heart- and respiratory rate monitoring from EarlySense, built right into the bed.

In addition, the new Hill-Rom Centrella Smart+ bed system includes convenience features such as USB ports and mobile device storage to make accessing those technologies safe and simple for patients. New surfaces deliver advanced therapy without compromising on quietness and include the ability for patients to adjust the comfort level of their surfaces. These updates improve the overall experience for patients during their hospital stay.

One of the main trends in healthcare sector is its digital transformation. What do you think about that and how does Hill-Rom implement digital capabilities in its products and solutions?

It's the future of healthcare! Earlier this month, we announced the introduction of LINQ mobile – a new product – as well as a global collaboration with Microsoft. Hospitals and health systems are challenged with integrating multiple, often disjointed technologies for care team communications. The LINQ mobile app integrates staff and patient interactions with clinical systems and patient information to help improve care team collaboration, communication, compliance and efficiency on an easy-to-use, scalable platform. Ultimately, LINQ mobile delivers improved communication to help caregivers deliver better care by connecting members of the care team to each other, to their patients, and to patient information in real-time.

The global collaboration with Microsoft is a potential game-changer for healthcare. The combined offerings, using Microsoft Azure®, are intended to dynamically analyze real-time sensing data from medical devices and historical medical record information, and communicate potential patient risk and hospital protocol actions directly to caregivers at the point of care.

Hisham Hout

Could you please explain in more detail how Hill-Rom products and Microsoft Azure platform will work together and what advantages it will bring to the hospitals, caregivers and patients?

Generally speaking, information and connectivity are critical to providing quality healthcare, reducing length of stay, driving efficiencies across the healthcare continuum and providing clinical and economic value. Our collaboration with Microsoft will help clinicians identify, communicate and mitigate patient risk in real-time, advancing our vision of connected care to address customer challenges and enhance patient outcomes."

Hill-Rom's connected solutions will integrate data from the company's medical devices (including smart hospital bed systems, vital signs monitors and other connected devices) and hospitals' electronic medical records through a common gateway infrastructure. The combination of medical device data and Azure Machine Learning will help assess and analyze critical and secure information at the bedside, delivering actionable insights to clinicians that can help reduce costly complications and enhance efficiency and patient outcomes.

Besides digital transformation, how do you see the Middle East Healthcare sector evolving?

Like other advanced regions, connectivity and digital health are the name of the game in the Middle East. Companies like Hill-Rom are continuing to improve medical devices, and caregivers now have more and faster access to the information they need to help patients and intervene earlier. I expect to see hospitals in the Middle East showing better economics, reduced preventable "never events" like pressure and injuries and falls, and patients with higher levels of satisfaction and shorter hospital stays.

Revolutionising Blood Cancer Treatment with CAR T-cell Therapy

By Sangeetha Swaroop, Contributing Editor

Making a massive breakthrough in the way cancer is treated, a new form of immunotherapy has emerged that is now providing a promising therapeutic option and which utilises the body's own immune system to fight cancer. Veering away from the conventional modes of cancer treatment such as chemotherapy, surgery and radiotherapy, an immunotherapy approach called adoptive cell transfer (ACT) now allows for a patient's immune cells to be collected, engineered, and used to treat their cancer.

Whilst many types of ACT in development show great promise, it is the CAR T-cell therapy has advanced the furthest, says Professor Stephen Mackinnon, from HCA Healthcare UK, who leads the bone marrow and stem cell program at University College Hospital in London. HCA Healthcare UK also has the unique distinction of being one of the first JACIE-IECT accredited private centres in the UK to offer CAR T-cell therapy under a commercial license.

"Conventional treatment for cancers like leukemia and lymphoma have generally involved the use of chemotherapy, sometimes with bone marrow or stem cell transplantation, but when these treatments fail, up until recently there had been no alternatives available. The result was that patients generally died of their underlying diseases," says Professor Mackinnon.

However, the extensively trial-tested and approved chimeric antigen receptor (CAR) T-cell therapy is now shifting the landscape in cancer treatments. He explains: "Our T cells play a vital role in our immune system, orchestrating the immune response and killing cells infected by pathogens. On the surface of every cancer cell are specific antigens relating to that type of cancer."

In CAR T-cell therapy, T-cells are collected from the patient's blood and genetically modified in a laboratory over a two-week period, he elaborates. "These adapted cells are then re-infused into the patient and now have the ability to recognise specific antigens on tumour cells and eradicate them."

Unlike traditional immunotherapy which usually refers to drugs used to stimulate or programme a patient's immune system to see and destroy cancer cells, CAR T-cells are created from a patient's own blood cells and engineered in a lab to be re-infused and recognise cancer cells, he says. "What makes it all the more exciting is that while chemotherapy targets all cells, including healthy cells, the receptors in CAR T-cell therapy are attracted only to the targets on the surface of the tumour cells."

A small amount of chemotherapy is given when the CAR T-cells are put back into the patient's bloodstream, but this is very minimal and is designed to allow the new cells to work properly, he further elaborates.

The process, explains Professor Mackinnon, is fairly simply and involves an apheresis procedure to isolate and collect a patient's T-cells. These T-cells are transported to a laboratory where they are engineered to express CARs that recognise cancer cells. These modified T-cells are then grown and expanded within the laboratory. At the time the patient is scheduled to receive them, these modified T-cells are reinfused to the patient following a course of conditioning chemotherapy.

CAR T-cell therapy is not an extension or improvement of an existing treatment, he asserts. "It is a first-of-a-kind therapy that has the potential to revolutionise the approach to cancer treatment. CAR T-cell therapies are a breakthrough treatment for many patients, offering a highly successful, well tolerated treatment option where previously there may have been none. Patients receiving this therapy show a rapid and durable regression and remission and that we haven't observed in other recognised treatments."

Currently, the CAR T-cell treatment is available for both children and adults with Myeloma, Acute Lymphoblastic Leukaemia and Diffuse Large B-Cell Lymphoma.

Although CAR T-cell therapy is currently not a first line treatment now and is only given when people have failed conventional therapy, Professor Mackinnon hopes that in the near future, it will be able to treat other forms of cancer including breast, prostate and colon cancers. "CAR T-cell therapies seem to have a lot of potential, but further research is needed to make them mainstream and available to patients globally," he says. "Many labs around the world are currently testing these therapies, not just for blood cancer but also for solid tumours such as pancreatic and brain cancers. Given the amount of interest the field has generated among researchers worldwide, it is likely that the next decade will be transformative in defining the cancer treatment paradigm."

He adds: "At HCA Healthcare UK, initially, we will be accepting referrals for patients with Diffuse large B-cell lymphoma and acute lymphoblastic leukaemia and are preparing to accept referrals for other types of blood cancers soon."

As a first-time participant at Arab Health, HCA Healthcare UK is connecting with healthcare providers and physicians across the region to introduce them to this new mode of cancer treatment.

Professor Stephen Mackinnon, Professor of Haematology, HCA Healthcare UK

Insight into Total Intravenous Anaesthesia

By Prof. Dr. PhD. Quirino Piacevoli, President, World Society of Total Intra Venous Anaesthesia, AAROI, EMAC Foreign Office Representative, Italian Resuscitative Anesthesiologists Association,Visiting Associate Professor, University Saint Cyrill and Methonio, Rome, Italy

Total intravenous anaesthesia (TIVA) is a technique of general anaesthesia, which uses a combination of agents given exclusively by the intravenous route without the use of inhalation agents (Gas Anaesthesia).

There is a solid rationale for the use of TIVA in some patient cases where the delivery of inhaled anaesthetics is impossible or disadvantageous, or in scenarios where traditional anaesthetic delivery systems may be unavailable or impractical. In other cases, the use of TIVA could make the process more efficient and advantageous for the patient.

In recent years, TIVA has become more popular, practical and possible due to two main reasons – firstly, the pharmacokinetic and pharmacodynamic properties of drugs such as Propofol and newer short-acting opioids, which make them suitable for intravenous administration. Secondly, new concepts in pharmacokinetic modelling coupled with advances in the technology of infusion pumps, which allow the use of algorithms such as Target Controlled Infusion (TCI).

During these last years, the cultural passage operated by the anaesthetists from manual infusion to TCI for the delivery of the drugs has been fundamental.

From manual control infusion to target control infusion – there are different ways to perform TIVA.

M.C.I. (Manually Controlled Infusion):

- Manual infusion of boluses
- Manually controlled infusions at a constant rate

T.C.I. (Target Controlled Infusion):

- Plasma T.C.I.
- Effect site T.C.I.

In the first way when we deliver, repeated for example, propofol boluses 0,3 mg/kg/min for 10 minutes, we will have:

- After 3rd – 4th minute: effect site concentration between 1,2 and 1,6 µg/ml (sedation);
- but after 10th minute: effect site concentration 4 µg/ml (hypnosis).

In other terms repeated boluses of drug determine a progressive increase of the plasma and the effect site concentration of the drug.

The second way is:

M.C.I: Manually Controlled Infusions at a constant rate.

Unfortunately, this has two main problems:

- A constant i.v. infusion rate results in a progressive increase in drug plasma and effect site concentration
- The same continuous infusion at a constant rate of a drug, determine very different effect site concentrations at steady state, in individual of different age, gender, weight and height.

T.C.I. (Target Controlled Infusion)

In comparison to traditional inhalation anaesthesia, the inherent benefits of TIVA via a Target Controlled Infusion (TCI) make it a more straightforward and user-friendly technique for the caregiver, while at the same time offering a faster and more comfortable patient recovery.

TIVA is purely an anaesthetic technique, when used in cases where post-operative pain management will be required, multimodal pain management strategies could be applied such as conducting regional anaesthesia prior to the TIVA for post-operative use to improve patient recovery.

It is an infusion technique for delivering iv anaesthetic drugs via computerised pumps. The software is programmed with pharmacokinetic models capable of maintaining the desired drug concentration levels in plasma (Plasma T.C.I.) or at the effect site (Effect Site T.C.I.) by varying the infusion rate. How? With a Pharmacokinetic model specific for each drug.

What is a Pharmacokinetic Model?

It is a branch of pharmacology dedicated to determining the fate of substances administered to a living organism. The substances of interest include any chemical xenobiotic as such pharmaceutical drugs, pesticides, food additives, cosmetics, etc. It attempts to analyse chemical metabolism and to discover the fate of a chemical from the moment that it is administered up to the point at which it is completely eliminated from the body. Pharmacokinetics is the study of how an organism affects a drug, whereas pharmacodynamics (PD) is the study of how the drug affects the organism. Both together influence dosing, benefit, and adverse effects, as seen in PK/PD models.

In this case is a mathematic model, which predicts the plasma concentration of a drug following a single bolus or infusion of variable time lengths.

Pharmacokinetic variables are:

I. The number of compartments where the drug is administered

II. Compartment "volume" (V1, V2, V3)

III. Exchange rate of drug between the various compartments ("K")

The aim of the model is to establish:

- The volume size of compartments (V1, V2, V3)
- The K drug exchange rate of compartments, including the site effect
- The clearances

This is achieved by comparing the variables of each patient (weight, height, sex, age). How?

A mathematical model, which describes the pharmacokinetic behaviour of the drug was incorporated into a computerised delivery system which enables the anaesthetist to achieve and maintain a target blood concentration of propofol or any other drug and to manipulate this at will.

Some Questions

- Is TCI the final solution to the problems of TIVA?
- Is it possible to further enhance the quality of TCI anaesthesia?
- What do we need beyond the TCI?

T.C.I. One Principle Characteristic

Various pharmacokinetic models, for the same drug, are reported in the literature for major part of those used in anaesthesia.

What About the Future?

Open Loop Control

- User applies an input to the system
- The system performs output is generated

Close Loop Control

The BIS is the weighted average of three sub parameters that analyse the phase and frequency relations among the component frequencies in the electroencephalogram. It changes monotonically with increasing depth of anesthesia. BIS correlates well with the hypnotic component of anesthesia Electroencephalographic parameters can be used to control anesthesia automatically.

Closed-Loop Control Offers Patients Several Potential Benefits

Because of more frequent sampling of the control variable and more frequent changes to the rate of drug delivery than with manually delivered anesthesia, the stability of the control variable may be greater. At the same time, the dose delivered is customised to meet the exact requirements of each patient, thereby overcoming the problems of interindividual pharmacokinetic and pharmacodynamic differences and differing levels of surgical stimulation.

Recovery times and the risk of inadvertent awareness may thereby be decreased. The BIS has already been used for automatic control of propofol sedation. We wanted to know whether BIS could be used to provide clinically satisfactory anesthesia and developed a computer system for this purpose.

Compared generally to traditional volatile anaesthetic techniques, TIVA offers several potential advantages. These include reduced incidence of post-operative nausea and vomiting, reduced atmospheric pollution, more predictable and rapid recovery, greater hemodynamic stability, preservation of hypoxic pulmonary vasoconstriction, reduction in intracerebral pressure and reduced risk of organ toxicity.

Quality control of anesthesia has become very important, owing the evolution in peri-operative management. Changes in surgical conditions and patient populations make it more than ever essential to manage anesthesia in a fast, simple and safe way. Hereby, a wide spectrum of pharmacological actions (analgesia, hypnosis, and suppression of somatic and autonomic responses to noxious stimuli) are needed to control the general anesthetic state.

The ultimate goal when administering a particular dose of an anesthetic or analgesic drug is to obtain the desired clinical effect, for which a specific therapeutic concentration of the drug at the site of action (= the receptor) is required. Individual anesthetics gives a unique spectrum of pharmacological actions, so the concept of a common depth of anesthesia may need to be revisited to reflect the separate clinical components of the ideal anesthetic state. To reach these high standards of care, an optimal titration of both anesthetic and analgesic drugs is required. Classically, opiates are used to manage nociception and short acting hypnotics are widely used to titrate the hypnotic component of anesthesia. However, by optimizing drug administration techniques, economics might become more beneficial for TIVA. Target controlled infusion might help.

In the nearby future, all sources of pharmacological and effect monitoring will be combined into anesthetic advisory and feedback systems enlarging the existing kinetic-based administration technology towards a total coverage of the dose- response relation. By measuring the patients' individual response to a certain given drug dose, drug administration could be guided by a pharmacodynamic advisory system estimating the complete dose-response relation. Additionally, when technology is found to be validated enough, closed-loop technology could be used. Closed-loop systems are able to make decision on their own and try to reach and maintain a pre-set target. As a result, they might help the anesthesiologist in optimising the titration of drug administration without overshoot, controlling physiological functions and guiding monitoring variables.

References available on request.

Prof. Piacevoli will be speaking on 'Safety and quality improvement in TIVA' as part of the Anaesthesia conference, at 12:30pm.

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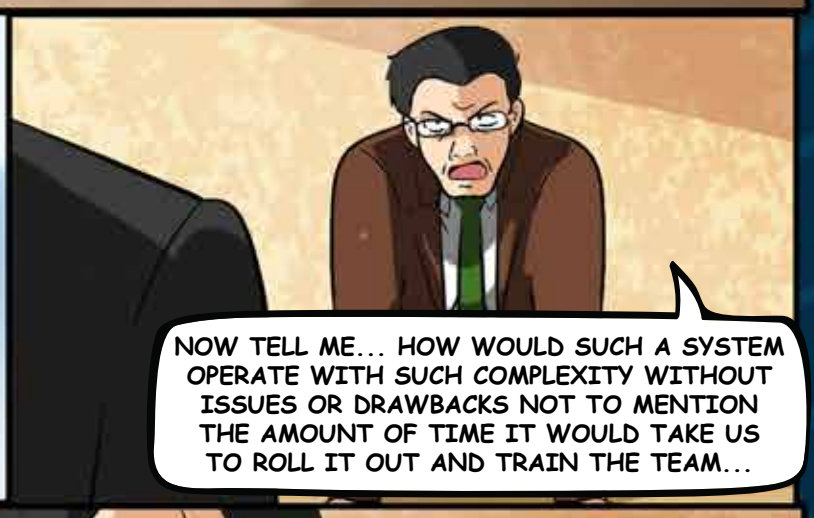

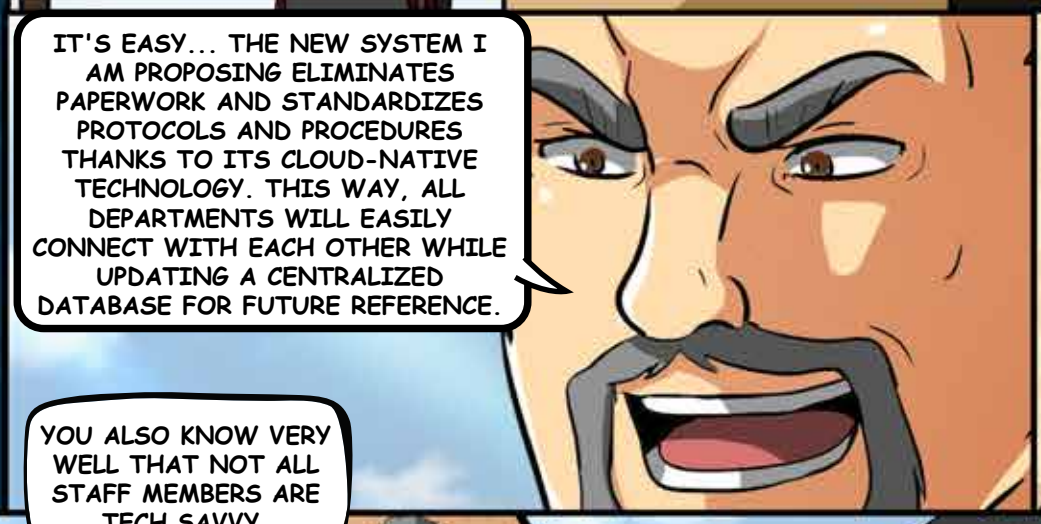

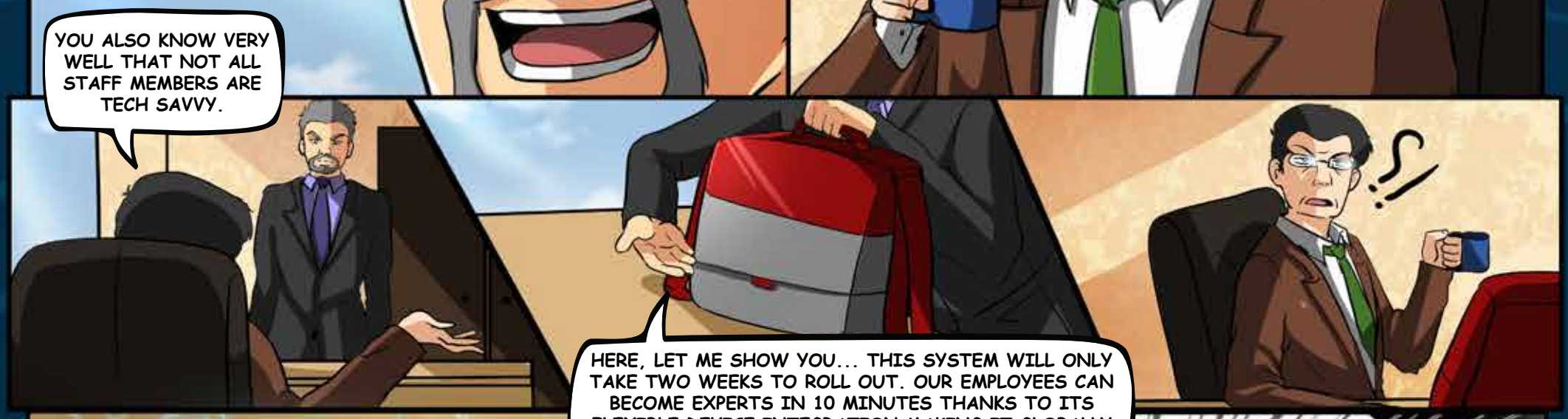

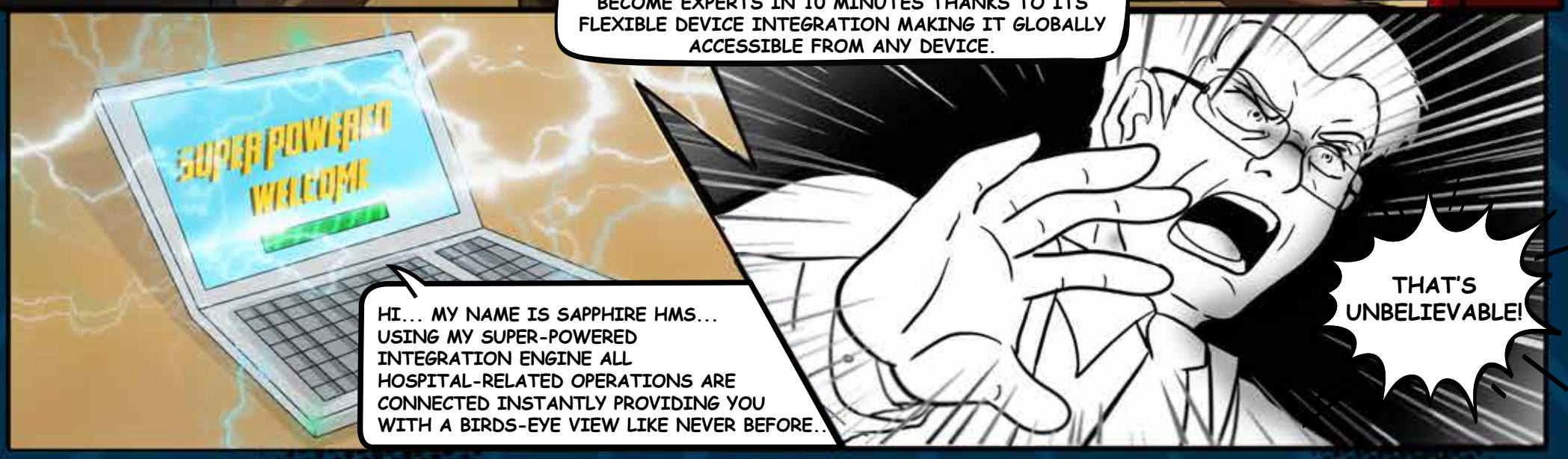

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...TO BE CONTINUED

Shedding Light on **Biologic Therapy for Psoriasis**

Article provided by Dr Haus

A radical psoriasis treatment, which uses the body's own immune system to fight the disease, is being presented at the show by a renowned UK skin clinic.

Dr. Haus – who runs a specialist dermatology clinic on London's Harley Street – is at the event to highlight Biologic Therapy, the next generation treatment for psoriasis.

Biologic Therapy is an emerging approach to treatment of many chronic diseases including psoriasis, an immune condition, which manifests itself on the skin and sometimes the joints.

When a person has psoriasis their skin replacement process speeds up, taking just a few hours to replace skin cells that usually take 21-28 days.

This accumulation of skin cells builds up to form raised 'plaques' on the skin, which can also be flaky, scaly, red on Caucasian skin, darker patches on darker skin tones, and itchy.

Biologic Therapy may take different forms but are all specially designed to mimic normal human molecules and effectively to encourage the body's immune system to fight back against disease. It is an emerging approach to treatment.

An example of a biologic drug used in dermatology is Secukinumab for the treatment of chronic psoriasis when conventional treatment options have failed. Secukinumab is given via an injection under the skin of the stomach, thighs or upper outer arms.

Dr Haus said: "We are extremely excited to be able to able to bring Biologic Therapy to Arab Health as it's at the very latest of cutting-edge techniques.

"Some people will have a family history of the condition, but others may not. A flare-up of psoriasis can be triggered by a number of factors, such as stress or anxiety, injury to skin, hormonal changes, or certain infections or medications. Biologic therapy has been going for many years, but we are still in early stages. We are using the most-up to-date products and are seeing fantastic results with patients."

Dr Haus' clinic is located within the Harley Street Medical Area, London, a collective of hospitals, clinics and specialists who deliver outstanding patient care through pioneering treatments and technologies.

Dr Haus

STERIGERMS
Mobile Devices to Neutralize Medical Infectious Waste

Article provided by Business France

As part of the CHASTAGNER Group of companies, STERIGERMS manufactures mobile devices which neutralize medical infectious waste on-site (MIW), in a water-free, discharge-free process, requiring nothing more than a 220/230 volts functioning power outlet. An exclusive supplier to the French Navy, STERIGERMS devices can be found onboard most of its ships and notably on the Charles de Gaulle aircraft carrier, the flagship of the French fleet. The company is exhibiting for the third consecutive year in the French Pavilion at the show, with its 60-liter model.

The ease of installation and treatment it offers has won over many countries, from the Gulf to India, not to mention both North and South America. STERIGERMS' machines are already up and running, from Paris to Tahiti, from Algeria to the Philippines, in Russia, and in Brazil.

During the Neutralisation Cycle, the hazardous waste put into the machine is subject to a temperature of 150°C and is also compacted due to a 12 tons pressure. The management robot guides the user, ensuring every possible means of protection: cover lock, thermal security, etc. Once neutralized, the treated waste can be evacuated, including via the household waste disposal system. The machine's performance has been subject to official testing and is 2018 compliant with the NF – T 72-180 standard.

Easy Installation and Local Treatment: A power outlet is all it takes. No water supply is needed. Just a plug delivering 220/230 volts. In addition, users are free to place the machines as it suits them best, thanks to their weight and wheel-mounted structure. The in-situ waste processing removes both the risks due to excessively lengthy MIW handling, and the costs arising from multiple transportation.

Proven Clean: No liquids or gases to discharge. No tubes to install. STERIGERMS keeps away any danger of pollution. Once the waste is compacted into pellets, the treated volume is divided by 10.

STERIGERMS machines are used anywhere from research centers working on infectious diseases to hospitals, ships, submarines, offshore oil platforms, dialysis centers, or such places as retirement homes.

STERIGERMS will be exhibiting on booth number Z2F02, France Pavilion.

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