Cover Story

Smart Diagnostics

Editorial

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Diagnostics in healthcare has always been an area that has been downplayed. That is probably why inaccurate and/or delayed diagnosis is something that has persisted in this field for decades. It is a systemic problem that continues to have an impact on patient treatment and outcomes.

The solution could potentially lie in smart diagnostics and on devices that could monitor patient health at all times and could help healthcare providers prevent, diagnose and treat patients efficiently and accurately.

We've already seen the use of smart and continuous monitoring in the field of cardiology where pacemakers and other implantables transmit information automatically and allow doctors to monitor and treat patients in case of a crisis. We have also seen an increase in the use of wearables that can help track individual health.

In this issue, our contributors talk about the application of **Smart Diagnostics** and the role advanced diagnostic approaches can play in preventing disease, monitoring patients and treating complex conditions.

Abeer Alzubaidi, Jonathan Tepper and Ahmad Lotfi discuss a deep feature learning model designed to discover biomarkers that are associated with cancer. Anna Ferrari, Sofia Vallecorsa and Alberto Di Meglio discuss the potential of wearable devices and artificial intelligence for improved diagnosis, management and treatment.

Gerard Castro and Suzanne Schrandt explore the use of technology and how it can drive diagnostic quality and improve the connection between clinicians and patients. Stephen Baker talks about the impact of Artificial Intelligence in breast imaging, and Jonathan Christensen discusses the current trends and developments in medical imaging technology.

João Bocas highlights the importance of wearables, especially during an infectious disease outbreak such as COVID-19, while Alan Kramer, Dylan Bieber and Theresa Rohr-Kirchgraber discuss the influence of biotin supplementation on laboratory testing and the underdiagnosis of cardiovascular disease among women.

In Management Matters, Sherry Wang, Lily Wang and Jonathan Revels talk about junior faculty support and why it matters. Anna von Eiff, Wilfried von Eiff and Mohamed Ghanem discuss the concept of a Magnet Hospital and how this approach can direct care activities in an evidence-based manner. Erin Birch talks about personalised healthcare and how the NHS could become a customer-focused organisation.

The future of healthcare must focus on intercepting diseases at an early stage and preventing them altogether. But this can only be achieved if diagnostic tools become more advanced so that diagnosis can be improved and diagnostic errors can be reduced. The healthcare industry has always focused on discovering new drug treatments, but it needs to invest time and money on researching and developing smart diagnostics. A one-size-fits-all approach no longer works; the healthcare industry needs fresh ideas and solutions to improve diagnosis and patient care.

We hope this journal will provide you with valuable information. As always, we welcome your news and views.

Happy Reading!