PULSUS
WWW.PULSUSCONFERENCE.COM

World Congress on
Neonatology, Pediatric Nursing and Nursing
&
8th World Congress on Immunology   March 11-12, 2019   London, UK

Precision i/o clinical trial: Leveraging technology to gain insight into treatment efficacy

Olga Kubassova
Image Analysis Group, UK

Cancer treatment is reaching a breakthrough due to the advances in Immunotherapy. The fundamental technology behind immunotherapy is to harness the body's own immune system to attack cancer cells. The original purpose of immune cells is to identify and destroy dangerous cells. However, cancer cells have developed the ability to hide from the immune system and therefore uncontrolled cell proliferation occurs which leads to tumour growth. In principle, immunotherapy makes cancer cells visible to the immune system. Therapies address both: they target the body's immune cells to identify cancer cells and enable them to destroy the dangerous cells. Therefore, immunotherapies are also called targeted therapies. For the first time in cancer treatment it is possible to address tumour heterogeneity in a more specific way. Immunotherapy enables us to study and manipulate the tumour microenvironment. However, to evaluate, proof and leverage the potential of immunotherapies, it is essential to find methods which can

Fig. 01

show the changes in the tumour microenvironment non-invasively. This is where advanced medical imaging followed by computer-based analysis becomes paramount. Advanced Magnetic Resonance Imaging (MRI) in combination with algorithms to calculate quantitative imaging biomarkers offer the unique opportunity to provide sensitive and specific tumour measurements. Especially in clinical research studies which aim not only to test the safety of a drug but also the efficacy in a certain patient population, the sensitive assessment of the therapy induced tumour microenvironmental changes are crucial for bringing the drug to the market.
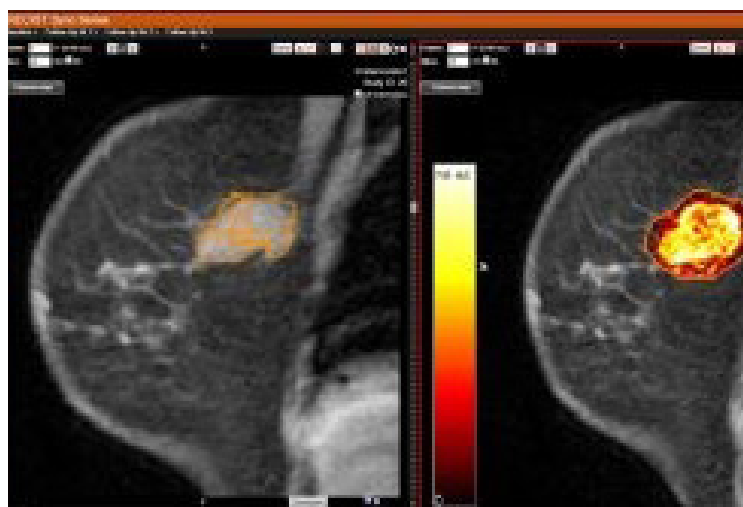
Biography

A mathematician with over 10 years expertise in actively managing innovation in life science companies, Olga Kubassova, PhD, is a healthcare innovator and biotech investor with passion for improving people's health. She has co-authored over 60 publications, books and book chapters, has become a scientific adviser to the UK government and EU funding bodies. She is a founder and CEO of IAG, Image Analysis Group, the imaging clinical research organization working with top bio-pharma companies to maximize their chances of brining novel therapeutic agents to the market. She is a four-time winner of national and international "Entrepreneur of the Year" awards. Olga's ambition is to bring truly disruptive technologies, artificial intelligence and best of machine learning to clinical practice and research, while expanding IAG's footprint and partnerships.

olga.kubassova@ia-grp.com

Notes: