Advances in Imaging Biomarkers: Innovative Technologies, Applications in R&D and Clinical Practice, Informatics and Regulatory Requirements

This report discusses advances in key technologies, the use of imaging biomarkers in drug discovery, as well as development and current use in clinical practice. It also outlines key collaborative initiatives in standardizing imaging technologies and informatics, as well as improving quantification and qualification without which the vision will not be realized.

Scope

• Highlights key technologies for imaging biomarker development in various research and clinical settings, as well as pivotal technology developments.
• Analyzes imaging biomarkers currently used in clinical practice as well as the future of imaging biomarkers.
• Provides case studies of individual imaging biomarkers and the companies/research collaborations responsible for their development.
• Discusses key collaborative initiatives aiming to introduce standards and improve quantification of imaging biomarkers.
• Analyzes potential for cost savings from the use of imaging biomarkers.

Research and analysis highlights

Imaging biomarkers are attractive & are now widely used in drug discovery development & in clinical care. Imaging biomarkers provide non-invasive approaches that are translatable from the laboratory to the clinic & allow researchers & clinicians to see in great detail how drugs are behaving in vivo.
Small animal imaging is a rapidly growing area in the preclinical development of new pharmaceuticals. Instrumentation to allow CT, PET, SPECT, MRI, ultrasound or optical imaging of small animals is available from a large number of suppliers & the largest pharma companies are actively developing their capabilities in this area.
The use of imaging biomarkers in clinical medicine has the potential to change the standard of care in many disease states for example by providing the ability to find tumors more easily & to stratify them according to the most appropriate therapy type. Molecular imaging can also identify other lesions, such as amyloid deposits

Key reasons to purchase this research

• Identify key technologies for development of imaging biomarkers to assist in biomarker discovery & development
• Identify relevance of imaging biomarkers to drug discovery & development
• Learn about the important efforts of public-private consortia that are working to develop new imaging biomarkers, qualify existing imaging biomarkers
• Understand potential for imaging biomarkers to improve diagnostic processes, enabling earlier disease identification & promoting preventive medicine
• Discover the potential of imaging biomarkers for improving decision making, terminating unsuitable drug projects & reducing costs in clinical care
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