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Higher quality = higher value
How can technology help?

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innovation + you

- Radiologists are serving more patients than any other specialty
- Imaging volumes are growing
- Approximate 7% increase predicted over the next several years

Yet, imaging is under great pressure to improve experience, outcomes and cost of care

Key trends in the transformation towards value based care

The shift to value based healthcare

Value of diagnostics will increase as with value-based healthcare the **selection of these expensive therapies** will command increasing value.

Strong focus on operational and clinical optimization: In developed markets, **labor costs dominate (50-60%)**

Cost will continue to be the biggest driver of healthcare. Consolidations will continue. **Operational efficiency remains a central tenet.**

Increased differentiation through software / data integration

7% imaging growth anticipated over 5 years in the context of **declining radiologist to population ratios** worldwide

Consolidation worldwide creating **hospital independent mega-practices** (DICs); **62% of US hospitals** are considering **Rad outsourcing**

Healthcare in general, and Imaging specifically, will **become less centralized**, like every tech industry

From 1990 to 2020, more than **100-fold increase** in the number of **facts per clinical decision**

Diagnostic pathways will become more complex driving need for decision support

Growing complexity in tumor characterization, sub-typing and **continuously expanding therapy options** and explosion of the evidence

Achieving the Quadruple Aim enables the ability to deliver on both higher quality of care with greater value

Optimized use of resources, lower cost of care delivery
Global healthcare spending is expected to reach **USD 8.7 trillion by 2020, from USD 7 trillion in 2015**[1]

Improved patient experience
Long exam time, a confined space, and noises lead to claustrophobia in 15%[2] and motion disruptions in another 20%[3] of patients

Improved staff satisfaction
Radiologists among top 7 most burned out physicians
49% of radiologists feel burned out[4]

Improved outcomes - Value-based healthcare
Unnecessary, sub-optimal, and repeat imaging contributing to up to ~USD 12 billion in charges[5]

Speed

Comfort

Confidence

1. Deloitte 2017 global health care sector outlook 2. Dewey M1, Schink T, Dewey CF. Claustrophobia during magnetic resonance imaging: cohort study in over 55,000 patients. J Magn Reson Imaging. 2007; 26(5):1322-7. 3. Andre, Jalal B., et al. "Towards Quantifying the Prevalence, Severity, and Cost Associated with Patient Motion during Clinical MR Examinations." JACR (2015). 4. Medscape Physician Lifestyle Report 2015. 5. Peer60; Unnecessary Imaging. https://reactiondata.com/wp-content/uploads/2015/02/peer60-unnecessaryimaging.pdf.

Aligning with the Quadruple Aim to demonstrate both quality and value

- Should start from improving the caregiver experience -- simplifying the daily workload.
- From better radiology practices come lower costs of care.
- Improved outcomes and enhanced patient experience will flow from both.
- This means easier to use equipment, automation of simple tasks in reading/interpretation and improved operations/practice management.
- New technologies also can support the change management and workflow improvements needed for success.

Improve the care provider experience

Combine user-centric diagnostic & interventional technologies with smart interfaces, automation & adaptive intelligence applications.

Leverage operational efficiencies so staff can do more with less, First-Time-Right

Promote better training, higher levels of competency and standardization of care

Quality and Value Creation

- Improve exam efficiencies by speedy up scan times without compromising image quality
- Reduce rescans by limiting or dynamically correcting for patient motion
- Deliver actionable information and insights so that resources can be deployed with agility

Lowering the cost of providing care

We can lower the cost of care by developing comprehensive, data-driven solutions that assess operational challenges and empower radiologists to make more strategic, efficient and effective decisions.

Remove waste from the system – focus on exam appropriateness, multiple diagnostic imaging scans, improved operational management

Quality and Value Creation

- Focusing on how to run a better department
- Reducing no-shows and low-value imaging
- Moving to virtual radiology
- Adopting performance management solutions

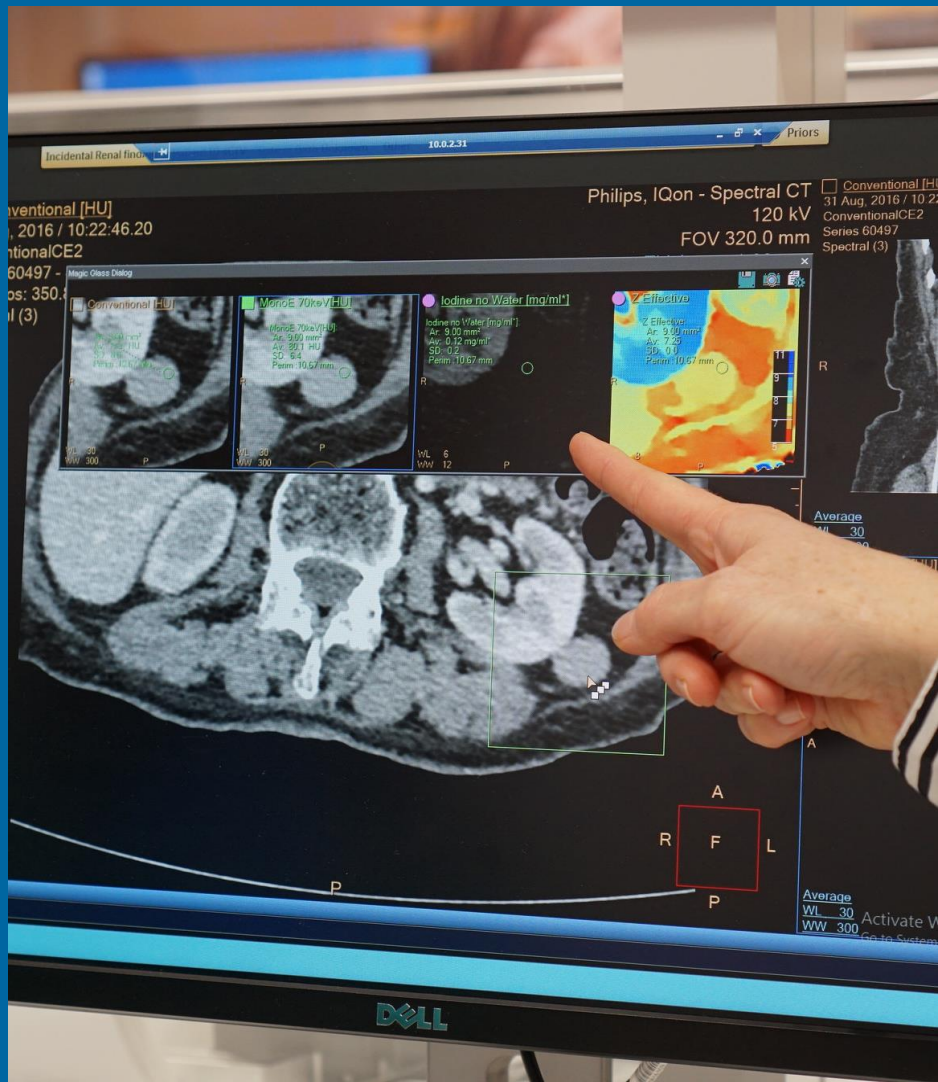
Improving health outcomes

Acquiring quality images is the first step to a confident diagnosis and the goal of precision diagnostics and precision medicine.

AI-driven innovations can anticipate need for information and image interpretation and support decision-making.

Quality and Value Creation

- Integrating data for diagnosis – Precision Diagnosis is the evolving approach to achieving First-Time-Right diagnosis and treatment
- Tele-”ologies” necessary to facilitate higher levels of competencies and standardization of care regardless of care sites
- Improving follow-up where new programs create algorithms to identify and generate patient follow-up recommendations from all radiology reports



Enhancing the patient experience

We need to focus on patients' key priorities: trust in the referring doctor, communication, comfort, safety and getting the image right the first time.

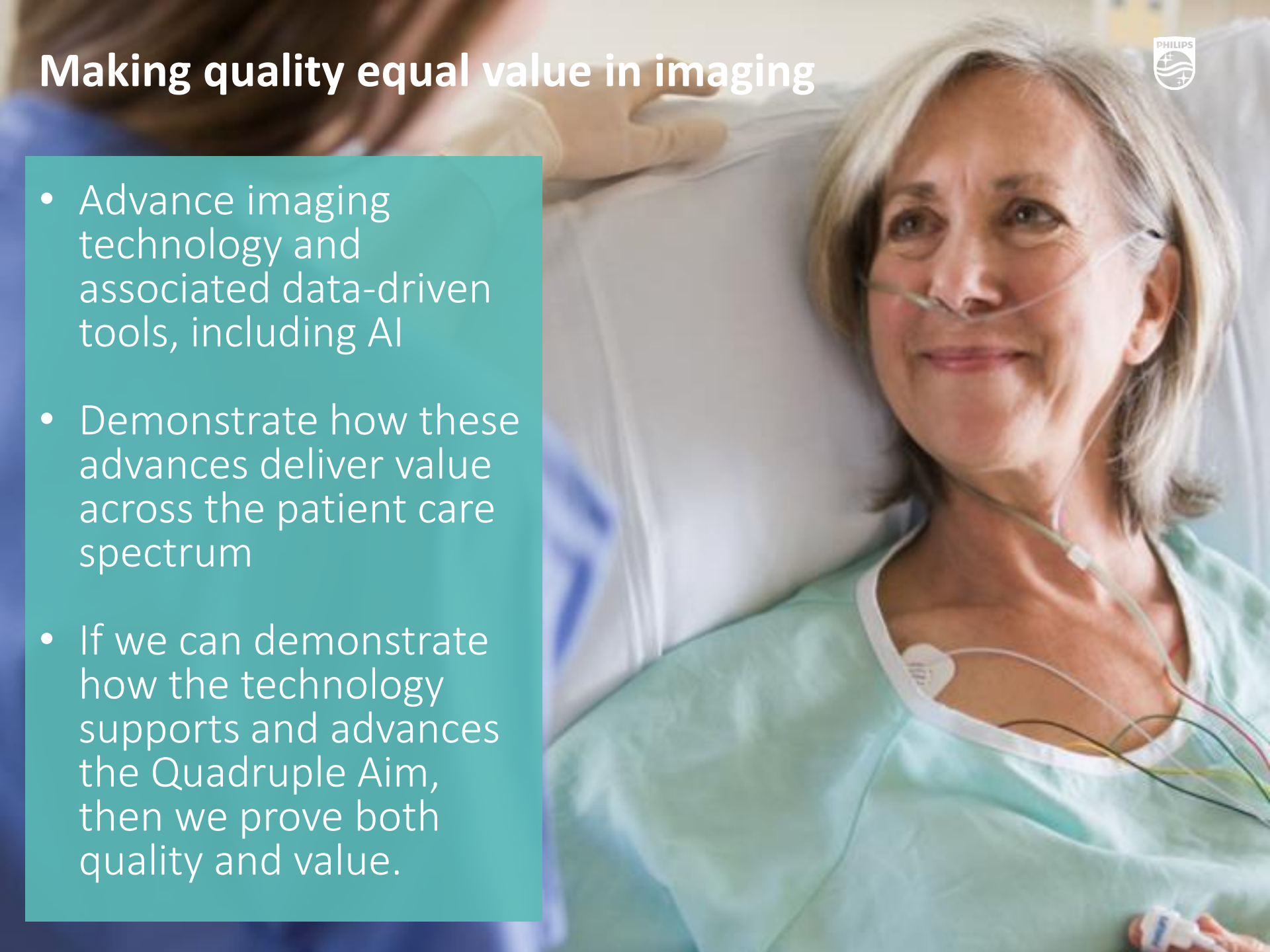
Patients want to get through the scan as quickly as possible and minimize their exposure to harmful radiation and contrast agents,

Quality and Value Creation

Improving ambient experience

- Imaging suites adopting immersive experience
- Speeding up exams
  - New clinical MR application features breakthrough acceleration technique
- Practicing dose management
  - Create a culture of radiation safety for both patients and staff
  - New technologies identify trends in radiation exposure across radiology department to inform radiation dose management goals

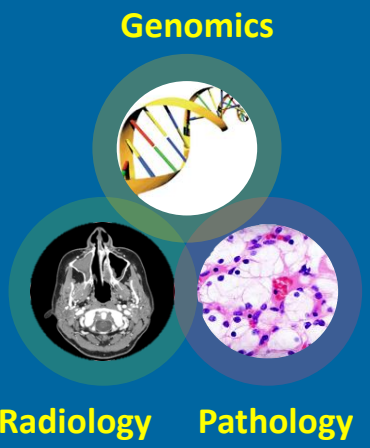
Making quality equal value in imaging



- Advance imaging technology and associated data-driven tools, including AI
- Demonstrate how these advances deliver value across the patient care spectrum
- If we can demonstrate how the technology supports and advances the Quadruple Aim, then we prove both quality and value.

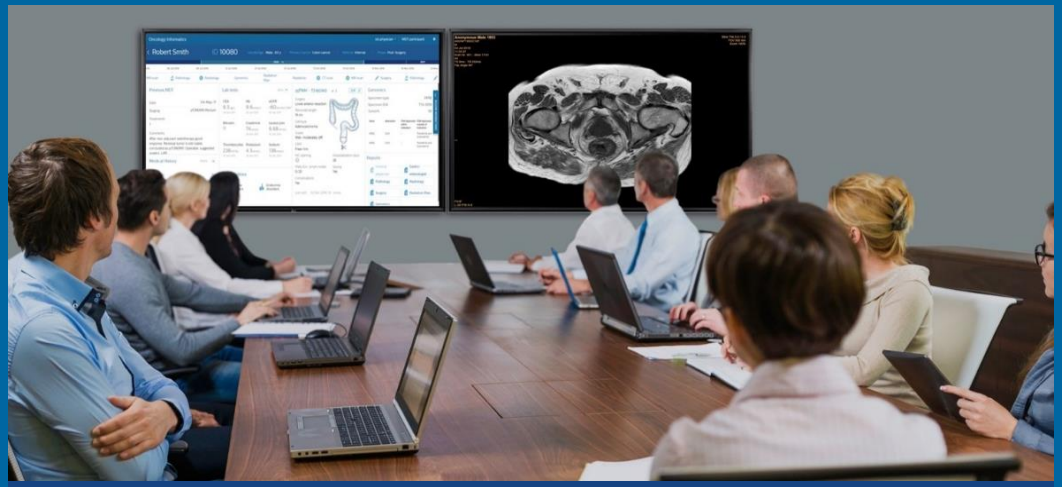
Quality and Value Creation…

Integrating data across modalities to create a precision diagnosis and deliver on the Quadruple Aim



Integrating patient data

Radiology, pathology, genomics and longitudinal data[1]



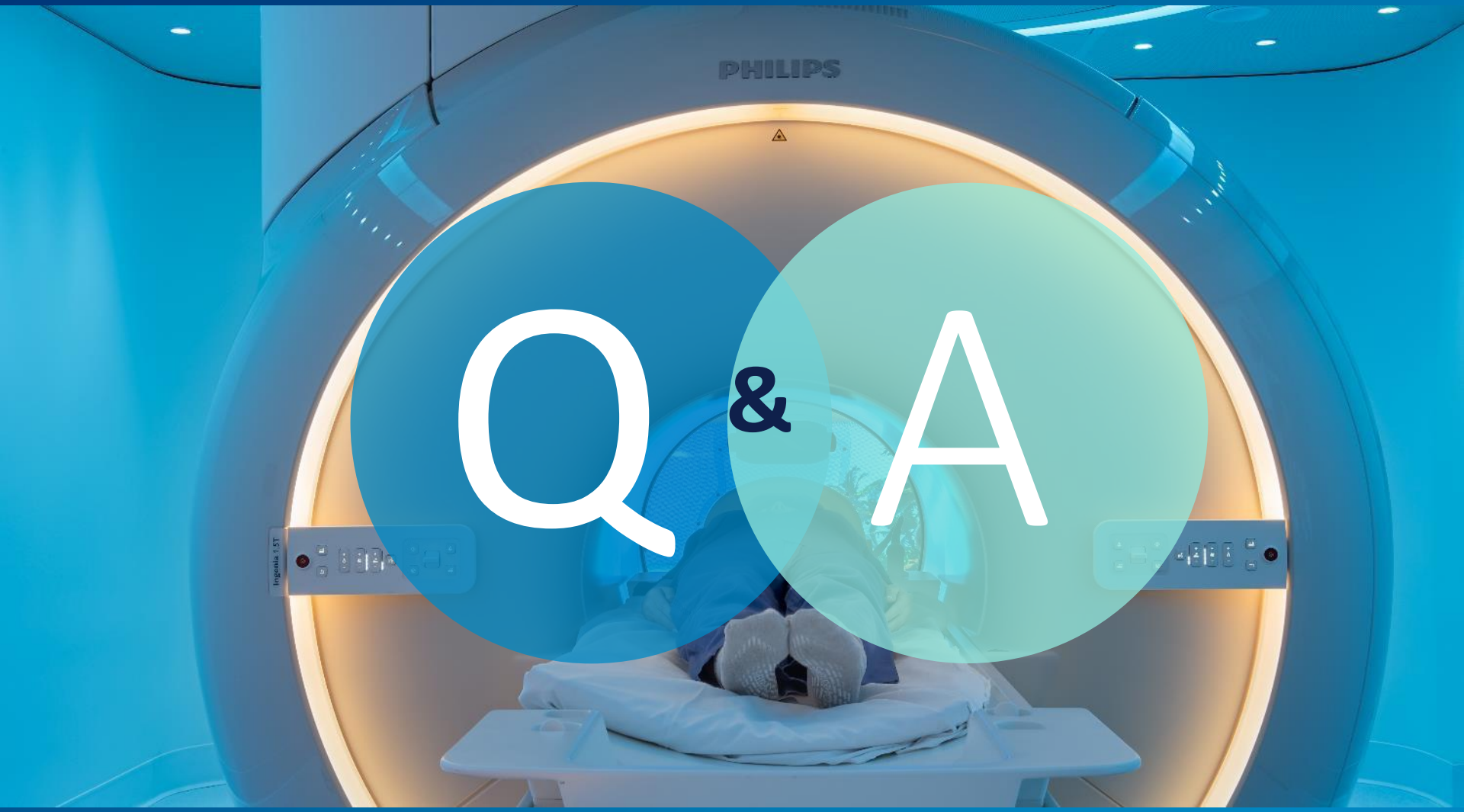
Oncology informatics with AI-enhanced decision support and treatment selection for tumor boards

Addressing variation in clinical pathways to improve outcomes and reduce over-/under-diagnosis, treatment and cost of care

[1] Part of Healthcare Informatics in Connected Care & Health Informatics and Digital Pathology in Other; [2] Initial studies show that implementation of Dana-Farber clinical pathways supported by real-time decision support and post-treatment data integration results in significant lower cost of care with no compromise in or even better survival rates

Key Takeaways…

- Greater Quality of care will equate to greater Value, but it has to be intentional **and we need to adapt our KPIs around it**
- Technology can enable both quality and value, but healthcare providers have to embrace a new way to work and new workflows requiring investment in change management
- Equipment and service companies are required to focus development on achieving the quadruple aim – whether products, services or solutions
- Companies and providers must actively leverage Precision Dx – and the ability to extract data to turn it into **actionable insights**. The goal should be the right treatment for the right patient at the right time



Q & A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