3D Mammography - Deep Learning CAD for DBT

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Objective:
Show how artificial intelligence (AI) can support the interpretation of digital breast tomosynthesis (DBT) images.

Content of the presentation:
DBT is increasingly superseeding 2D mammography in diagnostic and screening settings. Because of DBT high image volume, it is desirable to support radiologists with reading algorithms while maintaining high quality. An increased number of publications show potential reading time reductions of around 50% (2019) and similar clinical performance of single reading of tomosynthesis with AI compared to double reading of 2D-FFDM (2021). Processing of images through AI systems is increasingly fast, so that they can be used either in settings where results are given to patients immediately or in batch readings, as often practised in screening workflows.

AI can be used as a decision tool, particularly in diagnostic settings, where interpretation may be performed by a single radiologist.
Due to increasing awareness among women about this technology, and their wish for quality improvement, there might be a demand for radiologists to add AI in the reading process.

Also, AI in DBT readings could be used to estimate cancer risks within a defined period of time and therefore may become a tool of stratification in a more personalized screening approach, which might be the challenge of the future.

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