Challenge:
Digital breast tomosynthesis (DBT) can take significantly longer to interpret than traditional 2D mammography due to the vast number of images. Reducing reading time without sacrificing radiologist performance or increasing recall rates is a challenge for DBT as a screening technology.

Solution:
PowerLook® Tomo Detection
Designed to optimize breast tomosynthesis reading efficiency, streamline workflow, and support cancer detection without compromising reading performance or increasing recalls. PowerLook Tomo Detection is an innovative radiologist workflow solution built on the latest advances in pattern recognition: Deep Learning. The highly sensitive and unique detection algorithm identifies regions of interest on the tomosynthesis planes and blends those regions onto a synthetic 2D image.

How does it work?
PowerLook Tomo Detection rapidly scans each plane in the tomosynthesis volume identifying suspicious soft tissue densities (masses, architectural distortions and asymmetries). These soft tissue densities are extracted from the planes and naturally blended onto a synthetic 2D image. The detected regions on the enhanced synthetic 2D image are linked to the appropriate tomosynthesis planes, creating an efficient and effective navigation tool for radiologists to decrease reading time and improve reader experience. Unlike traditional 2D cancer detection solutions, PowerLook Tomo Detection is designed to be used concurrently throughout study interpretation.

Benefits include:
- Up to 36.5% reduction in reading time with an average of 29.2% while maintaining high sensitivity and low false positives
- >90% sensitivity in detecting malignant soft densities
- >40% more malignant soft tissue densities visible on synthetic image enhanced with PowerLook Tomo Detection vs the unenhanced image
- Improve tomosynthesis reading workflow and radiologist reading experience
- Easily navigate the tomosynthesis volume from a single enhanced synthetic image
- Built on Deep Learning technology for continuous improvement

Reduce reading time
Optimize radiologist workflow
Improve reader experience
PowerLook Tomo Detection is currently available with GE’s digital breast tomosynthesis and when combined with the GE V-Preview synthetic 2D image creates the Enhanced V-Preview image. By blending the detected regions onto the V-Preview synthetic 2D image, over 90% of malignant soft tissue densities seen on the tomosynthesis planes are visible on the Enhanced V-Preview image.