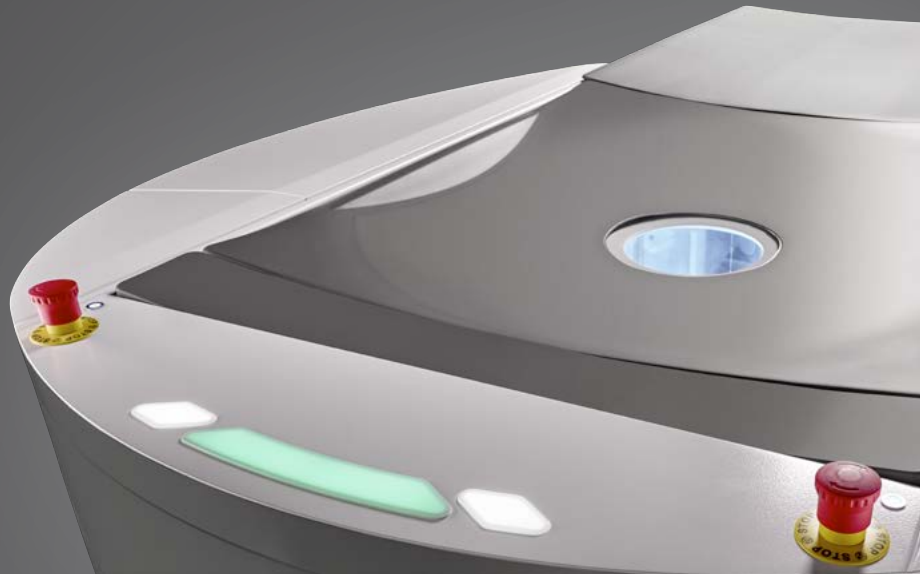
AB-CT Advanced Breast-CT

nu:view

A DISRUPTIVE TECHNOLOGY
IN THE ERA OF BREAST IMAGING



MADE IN GERMANY

Prof. Dr. Dr. med. h.c. mult.
WILLI KALENDER, Ph. D.
Founder and Scientific Advisor

“Dedication to Computed Tomography has driven my professional life for more than 30 years by now. I am very proud that AB-CT is fully reflecting this dedication — last but not least for the benefit of our customers and patients.”

LEADING EDGE

Even with high-tech technology and skilled, qualified radiologists, early and reliable diagnosis of breast cancer remains challenging. Conventional diagnosis methods, while well established, are not always reliable. 3D imaging with high isotropic resolution, on the other hand, offers clear advantages.

nu:view, the world's first breast-CT scanner to use spiral CT technology, is the brainchild of Erlangen-based company AB-CT. With the CE marking for **nu:view** in place, the new scanner is already in use on patients at hospitals in Europe.

What sets **nu:view** apart is the very high image resolution coupled with low radiation dose and short scan times. To obtain the best possible image quality and maximize radiation dose efficiency at the same time, the detector uses state-of-the-art single photon-counting technology. Unlike conventional scintillation, **nu:view** uses detectors made of cadmium telluride (CdTe). In the course of one rotation around the female breast 2000 projection images are created — with a full spiral scan taking as little as seven to 12 seconds.

Doing all this without breast compression, an excellent patient comfort is ensured. For the first time a CT scanner makes it possible to acquire images of the entire female breast in a single scan in true 3D without superimposition and a superb soft-tissue differentiation.

SPECIFICATIONS

1. True 3D images of the breast without superimposition
2. Superb soft-tissue differentiation
3. Optimized for fast scanning with acquisition times of 7–12 seconds per scan
4. Low patient dose levels in the range of diagnostic mammograms
5. Improved patient comfort without breast compression
6. Full clinical integration (RIS & PACS)

X-RAY TUBE

- Focal spot size: 0.3 (IEC 60336)
- Tube voltage: 60 kV
- Tube current: 5–125 mA
- Power: 7.5 kW

SCAN

- Spiral CT scan
- Up to 2000 projections per 360°
- Acquisition times of 7–12 s per scan
- Low patient dose levels in the range of diagnostic mammograms

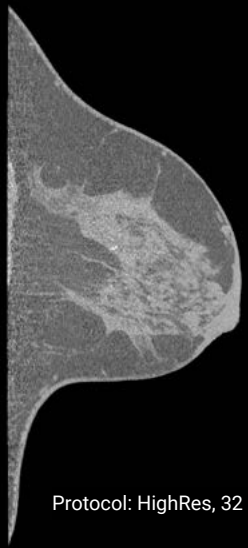
DETECTOR

- Type: Photon-counting detector (direct conversion)
- Sensor: CdTe, 0.75 mm thick
- Pixel size: $(0.1\ mm)^2$
- Detector area: about $280 \times 50\ mm^2$
- Frame rate: up to 1000 Hz

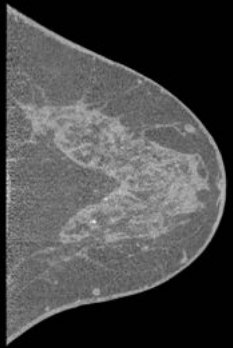
RECONSTRUCTION

- Fully isotropic high spatial resolution
- Field of measurement: Ø 200 mm × 160 mm
- Voxel size: $(0.15\ mm)^3$
- Filtered back-projection reconstruction algorithm

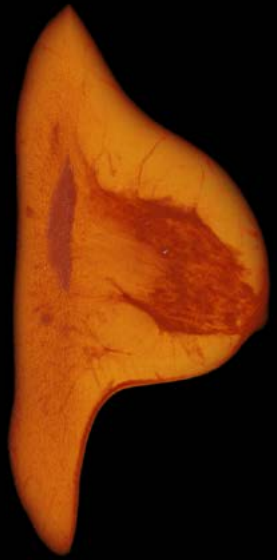
SAGITTAL VIEW



TRANSVERSAL VIEW



VOLUME RENDERING

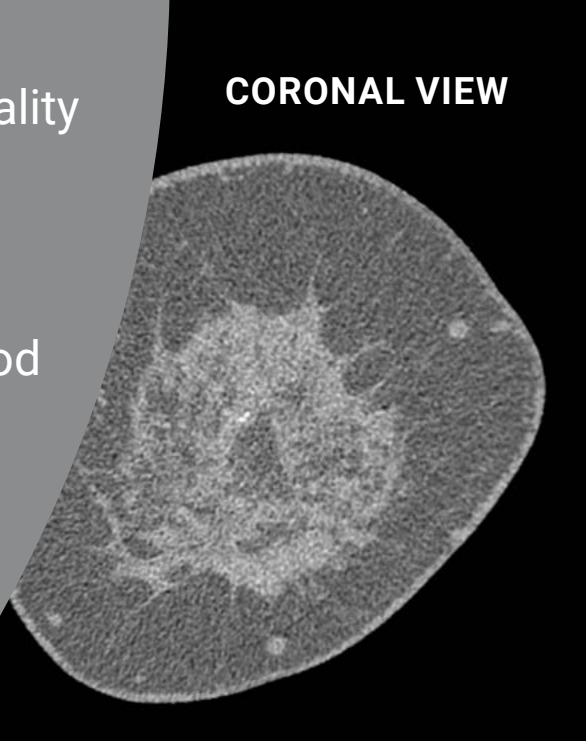


Protocol: HighRes, 32 mA, Length 80 mm

“The images are impressive. The image quality is excellent. Compared to mammography, the three dimensional, non-superimposed images make it far easier to detect micro-calcifications. This non-compressive method also means less discomfort for the patient and reduces the number of additional ultrasound images into the bargain.”

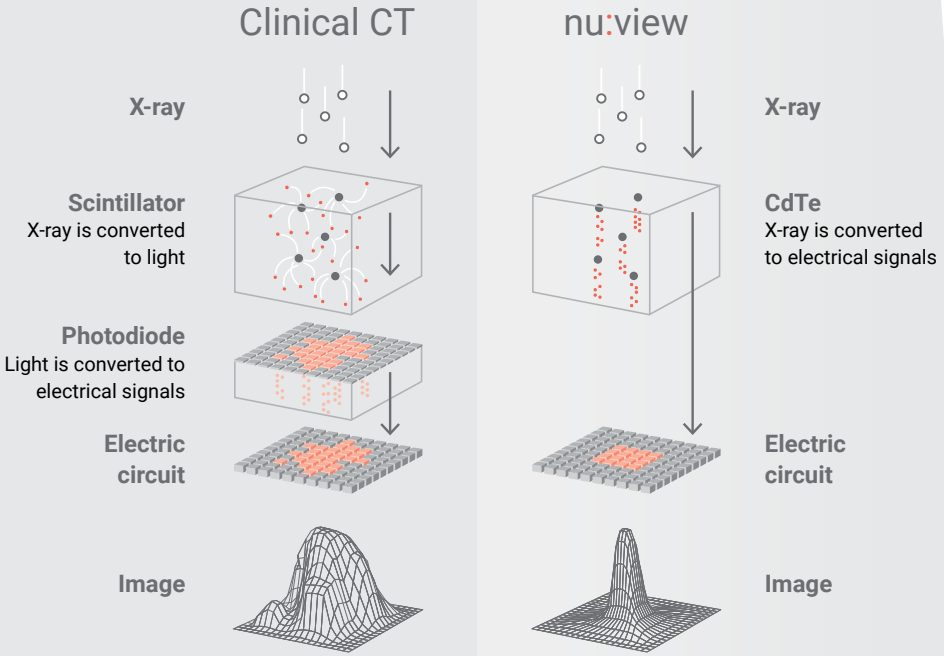
Prof. Dr. **ANDREAS BOSS**
University Hospital Zurich (USZ)

Images to his courtesy



EVERY SINGLE PHOTON COUNTS

Latest technology to lower the dose in medical imaging.



Direct Conversion

Empowered X-RAY Imaging

PHOTON-COUNTING IN X-RAY DETECTION

Direct Conversion's **long-term collaboration** with AB-CT resulted in the world's first true 3D spiral breast-CT system using its photon-counting detector technology.

Direct Conversion is the **world's largest supplier of CdTe and photon-counting hybrid pixel detectors** and will continue to support AB-CT in future developments.

Direct Conversion's detector technology provides the **highest sensitivity, accuracy and speed** for advanced medical applications.

Source: **YORK HAEMISCH**, Ph.D., M. Sc. Eng.
Director, Technical Sales & Business Development, Direct Conversion AB (Sweden)

CERTIFIED

nu:view — the leading edge breast-CT scanner has received CE approval in 2018.

AB-CT has established and maintains a quality management system for medical products in accordance with **EN ISO 13485:2016**. It has been certified by the Certification Body TÜV Rheinland LGA Products GmbH.

nu:view can not be purchased world-wide yet.
Please contact AB-CT to check availability in your territory.

WE ARE AB-CT

A vibrant community of genius SW engineers, design engineers and medical physicists form a team that did not just develop another CT device, but a disruptive technology — Made in Germany.

Our goal is to enable radiologists all over the world to diagnose breast cancer early as this is the cure.

LUDGER HAJDUK

HEAD OF CUSTOMER RELATIONSHIP MANAGEMENT

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