MAMMOMAT B.brilliant

Women deserve fewer maybes

↗ **siemens-healthineers.us/mammomat-bbrilliant**

SIEMENS B.brilliant

SIEMENS
Healthineers

Continuing challenges in breast cancer detection

For women, **breast cancer** is the **2nd leading cause of cancer-related deaths** in the developed world.[1]

10–30%

Radiologists **still miss** between **10% and 30%** of breast cancers.[1]

"The last thing I want in breast cancer screening is a 'maybe.' I want straight-forward answers and either a 'yes' or 'no.' "

MAMMOMAT B.brilliant

Women deserve fewer maybes.

Women deserve answers

A new dimension of image quality in digital breast tomosynthesis thanks to PlatinumTomo.

Women deserve comfort

Make patient comfort a priority with smart, fast, and intuitive workflows. In addition, benefit from a design that helps you prevent physical strain.

Women deserve clarity

MAMMOMAT B.brilliant provides quick and easy access to supplemental modalities like biopsy and contrast enhanced mammography for precise diagnostic clarification.

Women deserve access

MAMMOMAT B.brilliant is a highly modular system with low total cost of ownership and impressive patient throughput capabilities, providing the ability to care for more patients.
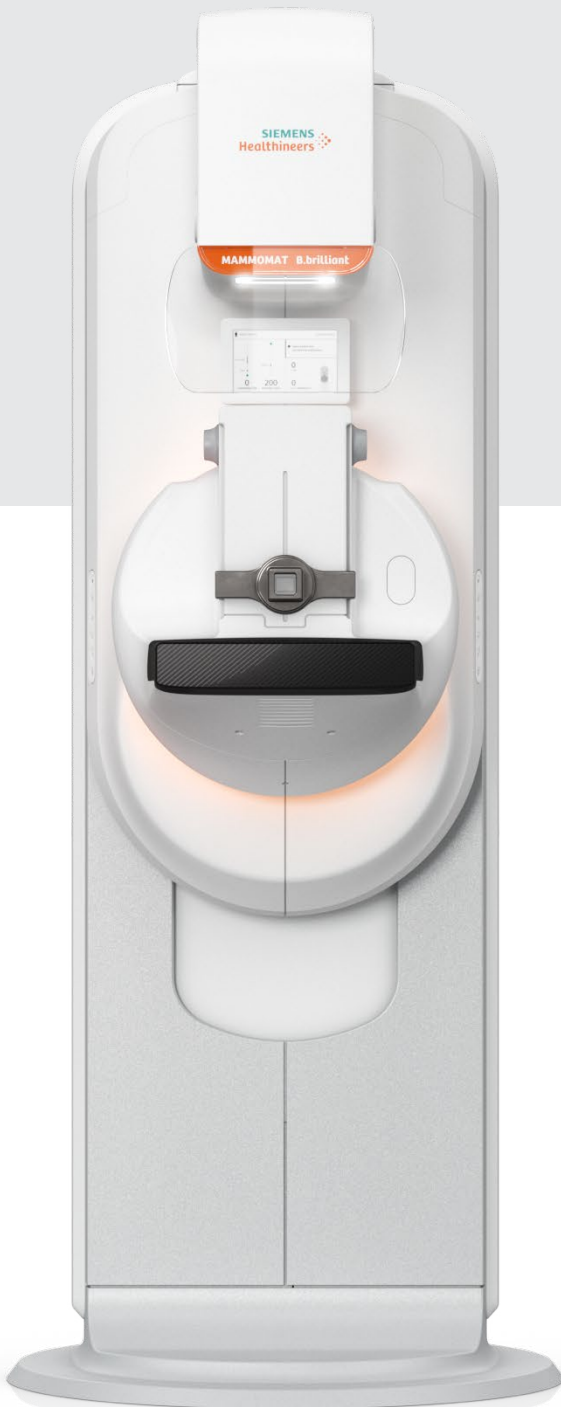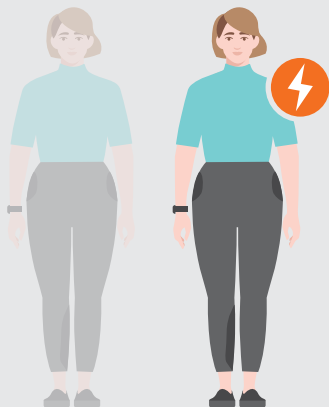
How many women wonder if they have breast cancer, even after screening? Over 10 years, more than half of all women screened for breast cancer will have a false-positive result – leaving far too many women with "maybes" instead of answers. At the same time, about 1 in 8 breast cancers are missed.[2]

The uncertainty surrounding screening and diagnostic results can indeed have detrimental effects on both patients and providers. Whether it leads to missed cancer diagnoses, avoidable recalls, or delays in diagnosis, the impact is significant. As we strive for better healthcare, you and your patients deserve better.

MAMMOMAT B.brilliant is the first and only mammography system to feature PlatinumTomo, a completely new 3D mammography framework. It combines 50° Wide-Angle Tomosynthesis with unparalleled acquisition speed, in-plane resolution, and customizable image impressions. At the same time, MAMMOMAT B.brilliant is designed to make patient and technologist comfort a priority and provide more women access to care.

There should be nothing inconclusive about a breast cancer screening – and yet, this is a reality for too many women. We think it's time to change that.

Women deserve answers

MAMMOMAT B.brilliant offers a completely new way to acquire 3D with PlatinumTomo technology. Integrating the benefits of 50° Wide-Angle Tomosynthesis, Ultra HD and completely new acquisition tube technology adapted from CT.

Challenges of false-positive or false-negative findings

Research suggests that **50% of women** getting annual mammograms will have a **false-positive finding.**[*5]
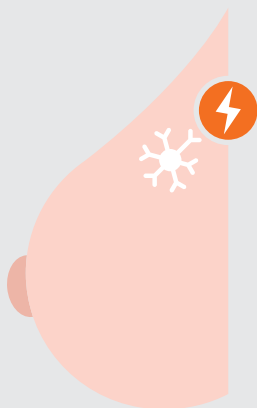
At the same time, about **1 in 8 breast cancers** are missed due to **false negatives.**[5]

Diagnostic uncertainty resulting from questionable image quality can result in negative consequences for patients – no matter if it is overlooked cancer, overdiagnosis, or avoidable recalls.

Highest depth resolution and excellent in-plane resolution

MAMMOMAT B.brilliant offers innovative features that provide excellent image resolution with fast acquisition and low patient dose. UltraHD Insight 2D synthetic images look closer to FFDM images thanks to unique flying focal spot technology and AI-powered image reconstruction.[5] Benefit from the highest depth resolution (the ability to separate structures)[3] and the potential to improve mass detectability as well as excellent in-plane resolution to enable more accurate detection of breast cancer.

Easy integration into your existing environment

MAMMOMAT B.brilliant allows you to choose image contrast and sharpness according to your image impression preferences. Your choice of image impression can help integrate B.brilliant easily into your existing fleet – and makes comparing prior images effortless.

Over a 10-year period.

Image impression settings are highly customizable according to your preferences
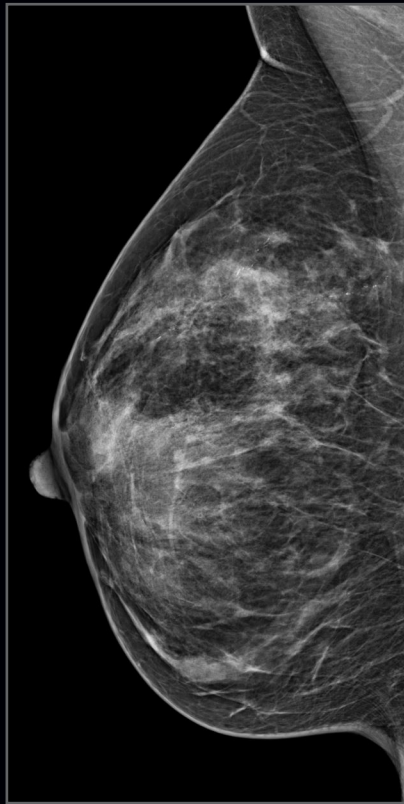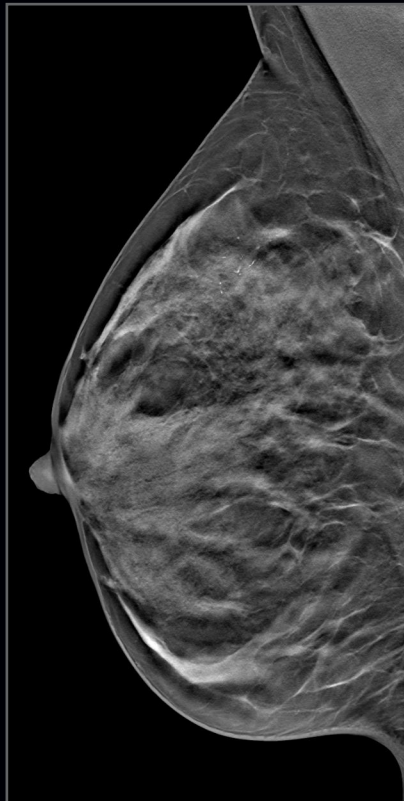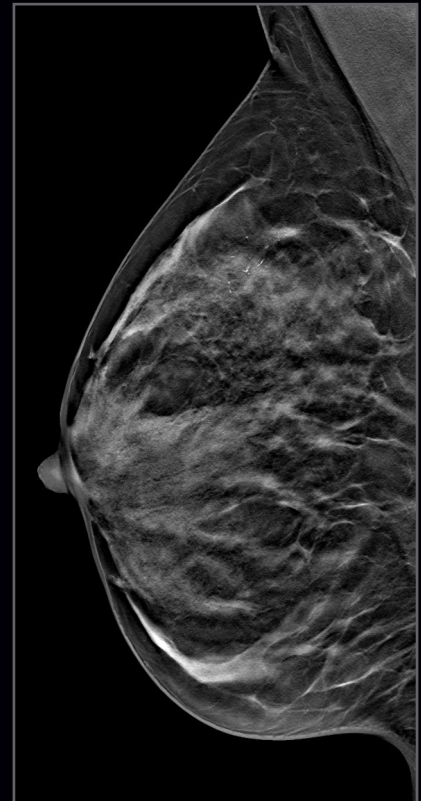

FFDM
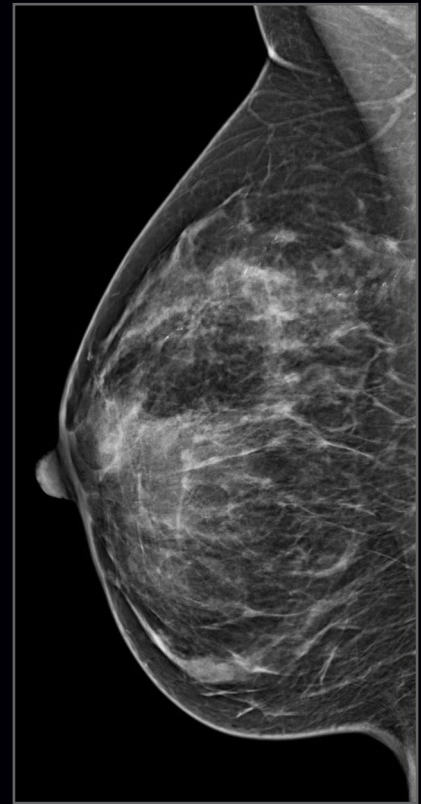
Insight 2D

High differentiation of overlapping tissues, high tissue separation and contrast resolution[3]

DBT Flavor 0

DBT Flavor 1

PlatinumTomo

The benchmark in tomosynthesis imaging

Learn how PlatinumTomo employs breakthrough technologies to innovate mammography.

Highest depth resolution[4] and excellent in-plane resolution, 50 degrees in 5 seconds.[2,7]

50° Wide-Angle Tomosynthesis
Leverage the highest depth resolution on the market[3]

Our unique 3D angulation provides you with the highest depth resolution and the potential to improve mass detectability.[6] With the widest angle and most low-dose projections on the market, 50° Wide-Angle Tomosynthesis has the potential to provide better lesion conspicuity for masses and asymmetries. It can help you overcome diagnostic challenges, like overlapping tissue, with up to 3.5 times higher depth resolution than standard tomo-synthesis.[3] MAMMOMAT B.brilliant is designed to provide more information to help you rule out the maybes in breast cancer detection.[2,6]

Cutting-edge detector
Faster read-out time for higher image acquisition speed

Our new detector features a faster read-out, meaning less compression time and higher tomosynthesis image acquisition speed. The slim detector housing provides more space for the patient to stand comfortably, while offering easy wheelchair accessibility.[2]
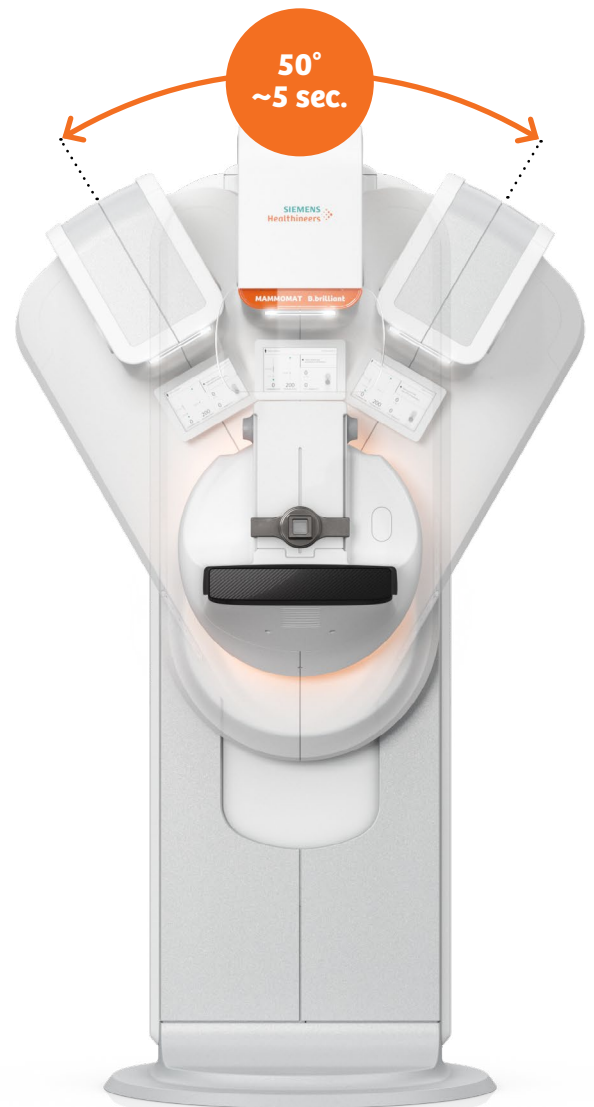
Unique CT-based flying focal spot technology
**Unparalleled in-plane resolution and acquisition speed**

Siemens Healthineers is the only vendor to integrate the unique flying focal spot technology in mammography. Adapted from CT, it enables short X-ray pulses that lead to a small and static focal spot – comparable to that of 2D – even when the tube is moving. Combined with the 50° Wide-Angle Tomosynthesis, this technology delivers images with excellent in-plane resolution without compromising depth resolution or acquisition time. The result: a faster workflow and visualization of lesions and architectural distortions.[2,3,8]

UltraHD PREMIA image reconstruction
Improve visibility of pathologies and benefit from fast reconstruction[2]

The PREMIA image reconstruction framework automatically reduces artifacts to improve visibility of calcifications and lesions. PREMIA never creates pseudo calcifications. Thanks to its AI-powered noise reduction, PREMIA improves synthetic mammogram sharpness and provides you with completely customizable image impressions for FFDM, tomosynthesis, and synthesized 2D images.
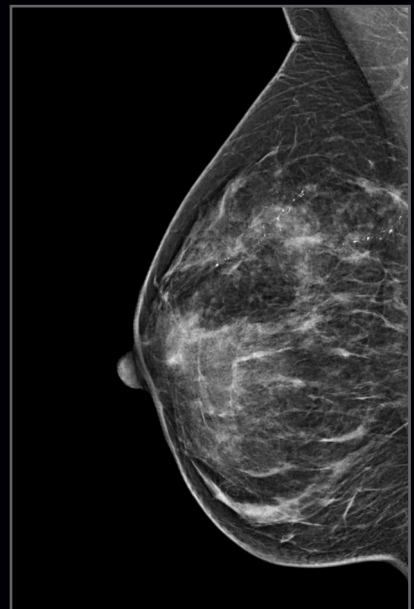
Rule out maybes and give patients peace of mind with proven diagnostic capabilities.

### Insight 2D – the new standard for synthetic mammograms
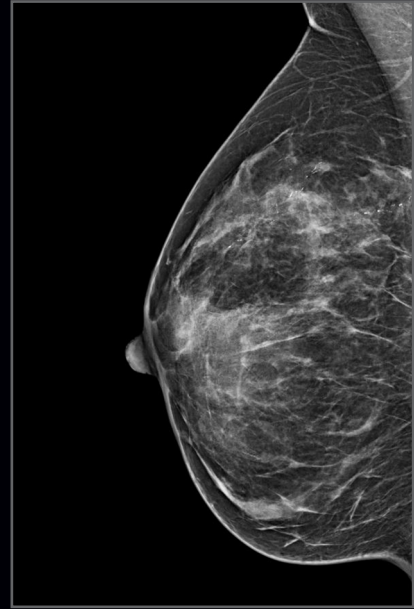
Get a synthesized 2D image that can replace FFDM as an adjunct to digital breast tomosynthesis. Designed to mimic FFDM and provide a fast evaluation of microcalcifications.

Insight 3D – the only rotating 3D mammogram

Insight 3D delivers superior visualization of microcalcifications and their distribution as compared to tomosynthesis alone.[9,10]

Why a wide angle is the right angle
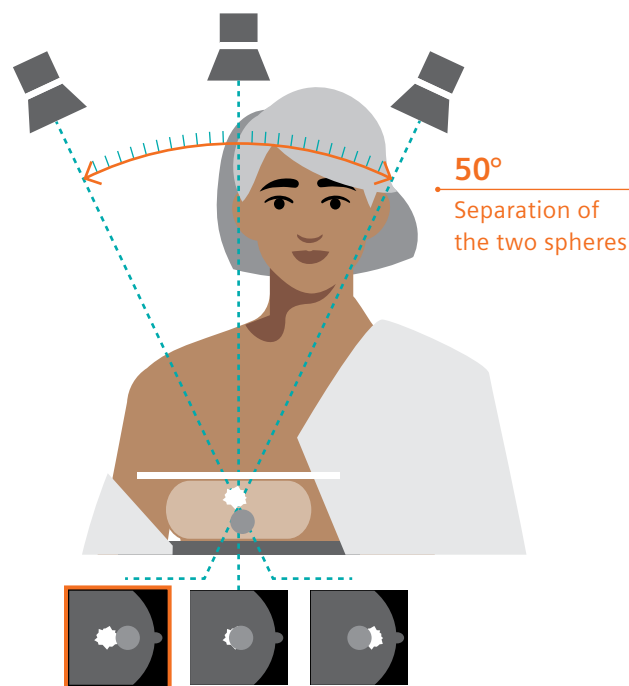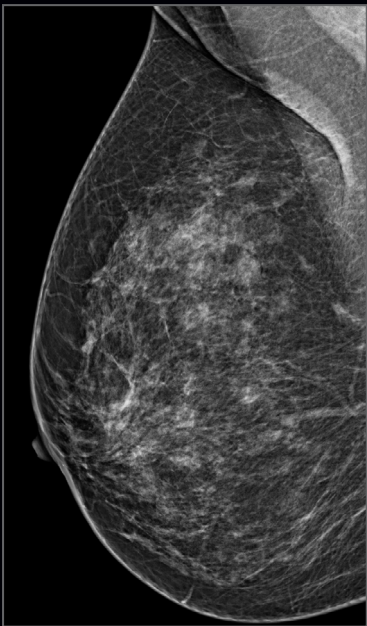
Traditional 2D mammography

Undetected
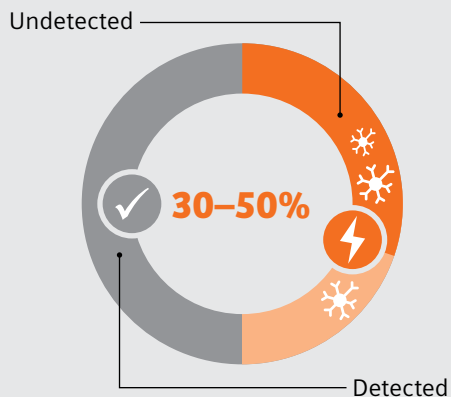
✓ **30–50%**

Detected

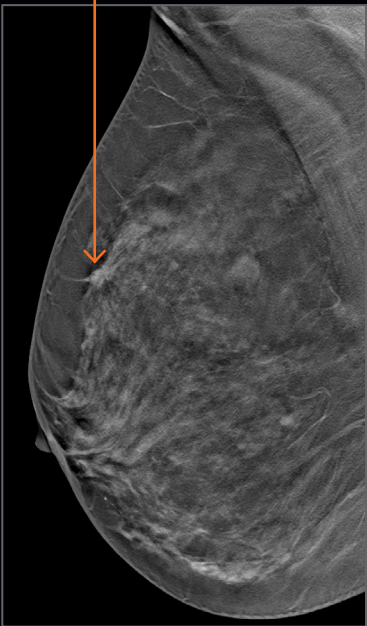**30–50%** of malignant tumors may be **left undetected.**[11]

PlatinumTomo including 50° Wide-Angle Tomosynthesis overcomes diagnostic challenges like overlapping tissue with up to 3.5 times higher depth resolution compared to narrow-angle systems in both tomosynthesis and biopsy.[3]

Benefit from high depth resolution of overlapping tissues to see and detect more[12,13]

50°
Separation of the two spheres

Definitive finding

Definitive finding

1aac840

FFDM

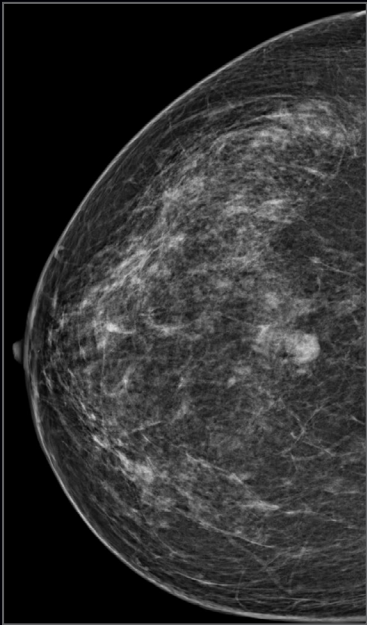**Wide-angle DBT Flavor 0**

Wide-angle DBT Flavor 1

Definitive finding

Definitive finding
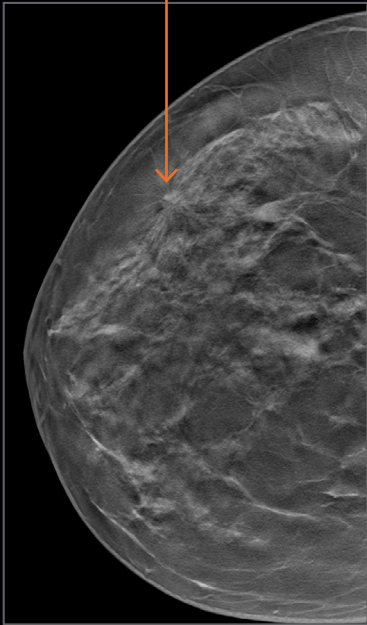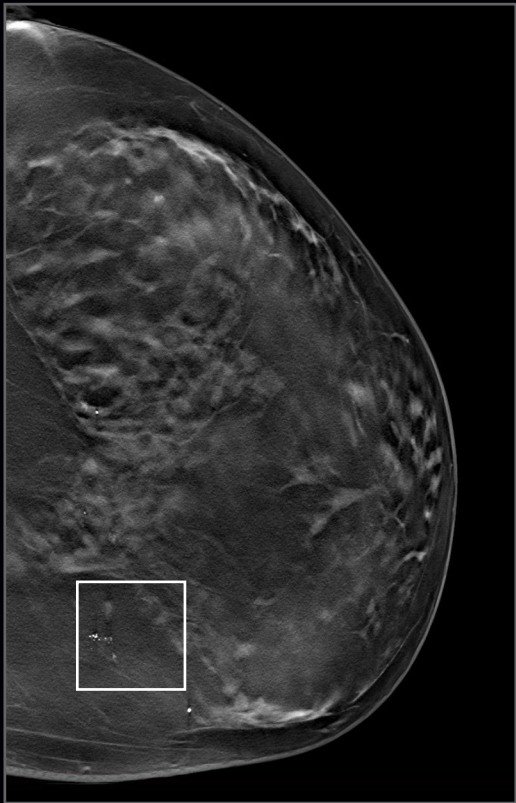
FFDM

Wide-angle DBT Flavor 0
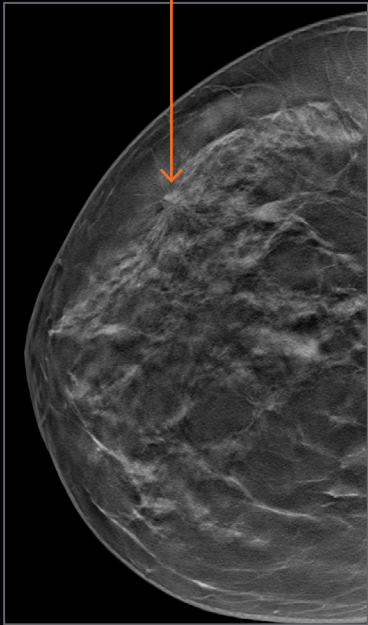
Wide-angle DBT Flavor 1
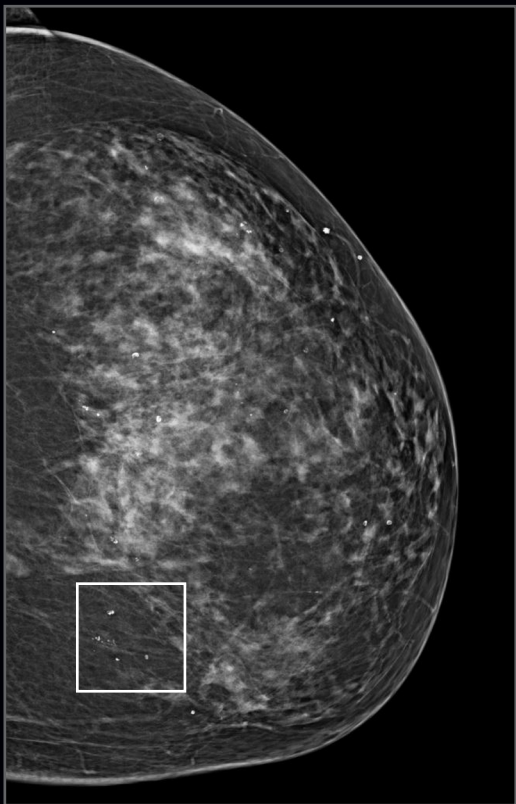
FFDM

DBT
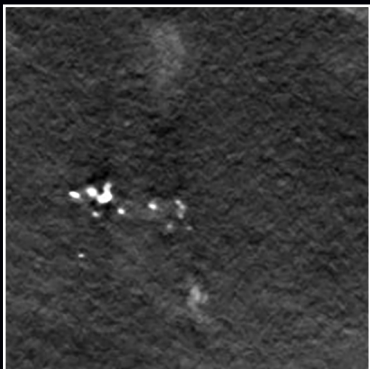
Designed to improve the visibility of microcalcifications

Our aim with the flying focal spot tube:

Best in-depth resolution without compromise

Start position without flying focal spot
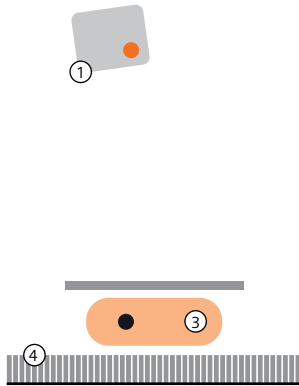
Projection **without** flying focal spot technology

Start position of next projection
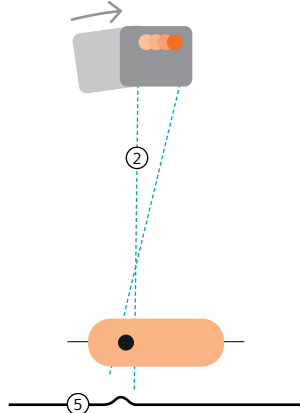
Result: A blurry object
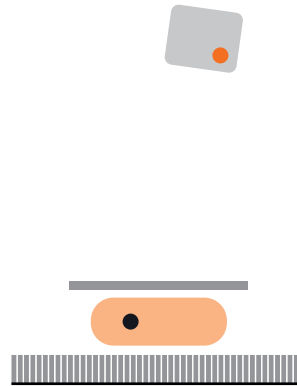
In a standard tomosynthesis, tube and focal spot constantly move together during the X-ray pulse. The result is a larger area of pixels and images with blurry edges.
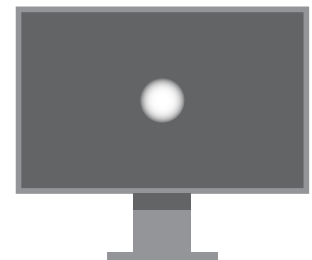
Start position of projection
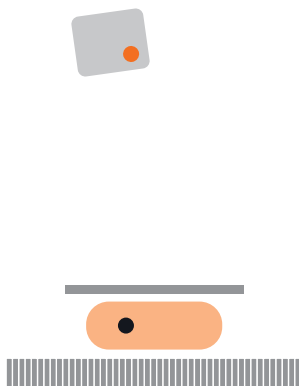
Projection **with** an flying focal spot technology

Start position of next projection

Result: Improved sharpness
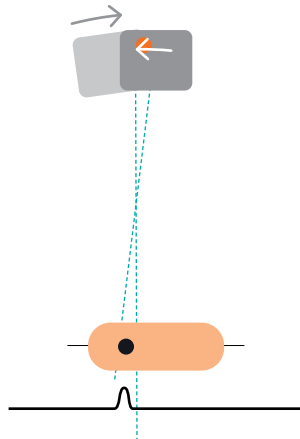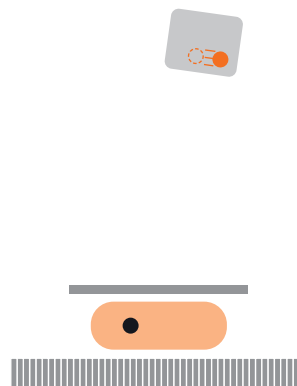
Flying focal spot technology compensates tube movement during each X-ray pulse by deflecting the focal spot in the opposite direction. The focal spot is effectively static during the X-ray pulse just like 2D. This generates images that have the highest depth as well as in-plane resolution.

Women deserve comfort

Challenging exams for patients and mammographers alike
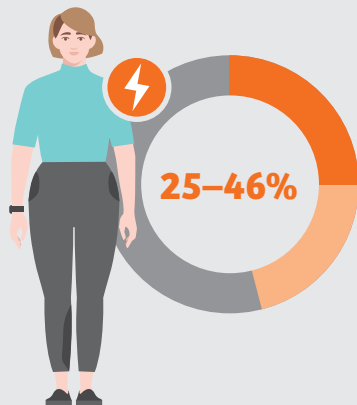
A study showed that **25–46%** of women **did not attend their next screening appointment due to pain** related to breast compression.[1]
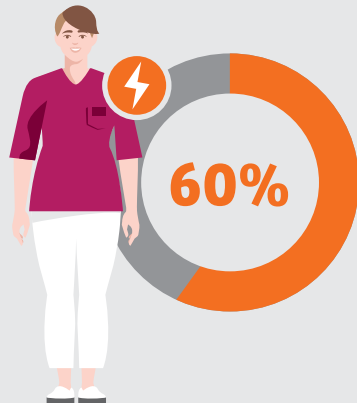
Meanwhile, **60%** of female X-ray technologists suffer from **physical strain.**[15]

Whether it's due to non-standardized workflows, difficulties in accommodating individual patient needs, or insufficient system guidance on the next examination steps, mammography exams may lead to physical strain for the radiographer.

It's critical that the women in your community receive regular breast screenings. When detected early, the 5-year relative survival rate for localized breast cancer is 99%.[1] Yet, research shows up to 46% of women did not attend their screening appointment due to pain related to breast compression.[1] Anxiety and discomfort felt during a mammogram can contribute to reluctance to comply with screening guidelines.[2]

Now, you can provide your patients with one of their most comfortable mammography experiences thanks to a thoughtfully designed system.[12]

Exam information at eye level

View patient and workflow information at eye level with the ComfortGuide Display. Have all patient information and next steps displayed where you need them, directly at the MAMMOMAT B.brilliant gantry.

Automated tube movement

ComfortMove is the ergonomic feature that aims to significantly reduce physical strain of technologists. ComfortMove makes patient positioning easier and safer, providing more freedom of movement for both technologists and patients to reduce repetitive work injuries.

A system designed with women's comfort as a priority

Reduce unnecessary steps
ComfortMove provides automated movement of the tube and gantry by automatically positioning itself out of the way so the tube does not stand between you and the patient.

Create more stability and comfort for patients
MAMMOMAT B.brilliant combines two features for increased stability and patient comfort: the detachable, optimized face shield and patient hand rest. The face shield is angled in so your patients can comfortably lean into the gantry during imaging, allowing for more posterior tissue visualization.

More features to increase patient comfort and satisfaction

• **OpComp** – automatic, optimized, and personalized breast compression for increased patient comfort and consistent image quality year over year. Reduce operator variability by providing the optimal compression for the optimal image, every time.

• **Low-dose exams –** intelligent software algorithm PRIME offers dose reduction without compromising image quality.[14] Short-pulsed acquisitions keep 3D dose low.

• **SoftComp Paddles** – designed to fit a woman's anatomy with soft-curved edges that reduce pressure points for better patient comfort.

• **MoodLight** – creates a welcoming room design and a soothing atmosphere for your patients.
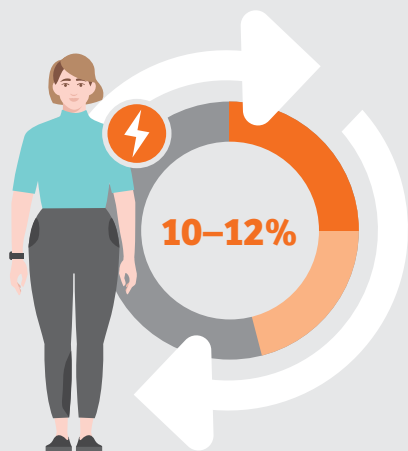

More freedom of movement for radiographer and patient alike – thanks to ComfortMove.

* The preferred degree of the angle can be set by an application specialist.

Delays and interruptions in diagnostic processes

10–12%

In the U.S., about **10–12% of women are called back** after a mammogram **for more tests,**[16] such as:

- Follow-up FFDM or tomosynthesis
- Breast ultrasound
- Breast biopsy
- Contrast-enhanced mammography
- Breast MRI

The processes and modalities involved in diagnostic clarification can lead to unnecessary delays and interruptions – and may cause long examination periods or deferred therapy decisions.

Women deserve diagnostic clarity

As a system that offers both TiCEM (Titanium Contrast-Enhanced Mammography) and tomosynthesis-guided biopsy, MAMMOMAT B.brilliant provides quick and easy access to supplemental modalities for precise diagnostic clarification in mammography. MAMMOMAT B.brilliant is modular, customizable, and future-ready mammography platform that already brings together valuable features that help to increase accuracy and speed, including wide-angle tomosynthesis targeting, needle navigator, and convenient workflows.

Accurate targeting, visual feedback on needle position, and quick biopsy results

Pinpoint precision for biopsies thanks to 50° Wide-Angle Tomosynthesis
Image acquisition with PlatinumTomo enables highest depth resolution to help you feel confident in your diagnosis.[3] Benefit from precise one-click biopsy targeting with an accuracy of +/-1 mm. A quick impression of the first image, the navigator for visual feedback on the needle position, and pre- and postfire tomosynthesis* images make your biopsy procedures fast and convenient.

More confidence for your biopsy procedures
The needle navigator is your visual guide enabling confident breast biopsy procedures. It offers you instant visual feedback on the needle and target position supporting you to confidently navigate the biopsy needle with precision. In addition, it can help you avoid unnecessary re-adjustment and movements of the biopsy needle.

* Only available in lateral view.

Accurate biopsy targeting thanks to image acquisition with PlatinumTomo

More time to focus on your patient during biopsy
InSpect is our integrated specimen imaging, performing magnified imaging in less than 20 seconds.

Stay with your patient and check the specimen immediately in the exam room, without having to reposition the patient or switch to another system, saving you and your patients time and avoiding having to spend money on additional specimen imaging devices.

TiCEM – expand your diagnostic insights with contrast enhanced mammography

Stay at the forefront of clinical developments
MAMMOMAT B.brilliant makes TiCEM results available quickly – offering a quick and easy pathway to contrast-enhanced mammography. The optimized titanium filter means there is no risk of overheating the tube and helps identify potential cancers quickly to rule out inconclusive lesions, providing an alternative to MR imaging when clinically indicated.

Repeat for additional views in a 10-minute window

Injection of iodinated contrast agent

~1.5–2 min. waiting time

Position patient

Acquisition of low & high energy images

Display of low-energy and TiCEM image
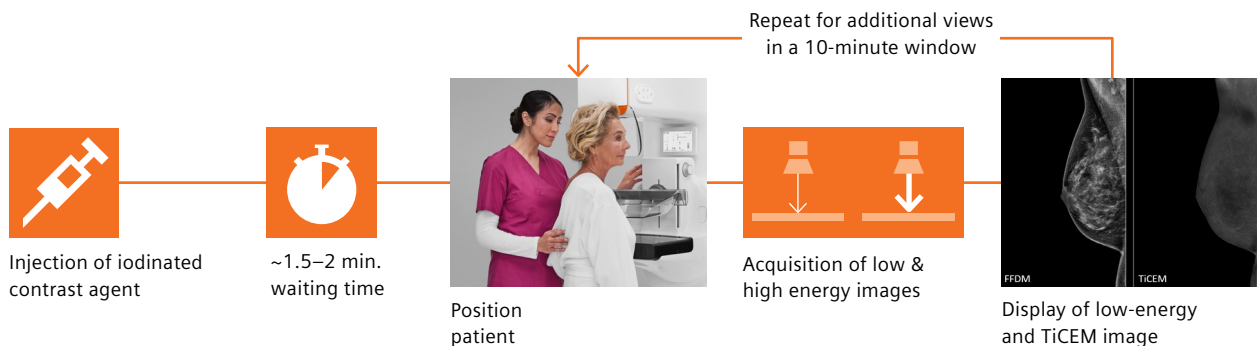
Mammography systems are significant investments

Healthcare spendings are continuously rising. **Healthcare budgets,** however, are not.
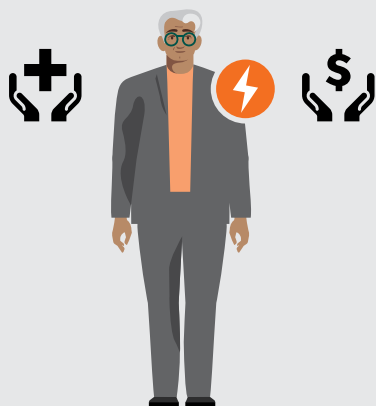
This creates a very **challenging situation for healthcare providers.** In screening settings, high-patient throughput is key and system downtime can create serious challenges. Institutions need to maintain a high throughput while relying on system uptime, serviceability, and support services.

Women deserve access

Breast cancer mortality rates can fall by nearly 20% with mammography screening.[1] Yet many patients face barriers accessing exams. Patients from racial minority populations, for example, are 72% more likely to develop invasive breast cancer before age 50 due, in part, to limited access to screening.[1] We want to help you change that. To ensure the availability of mammography in your community, you need a modular, customizable, and future-ready mammography platform with valuable features that help increase throughput.

Performance optimization for high patient throughput in screening
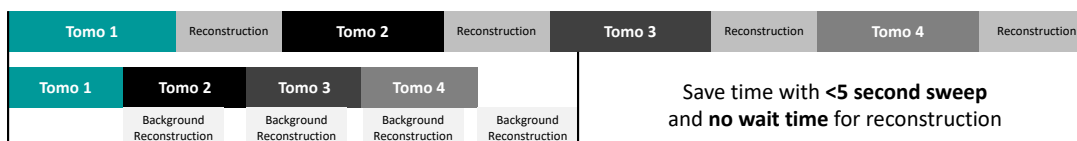
Scan more patients per day without compromising quality
MAMMOMAT B.brilliant will not hinder the ability to care for more patients. B.brilliant comes with Tomoflow, allowing the technologist to move through the exam without having to wait for 3D images to reconstruct. Coupled with a five second sweep time, this means you can spend more time with your patients or reduce wait times for women who need to be taken care of.

Optimize your workflow – TomoFlow | Seamless 3D exams, satisfied patients

Without MAMMOMAT B.brilliant	Tomo 1	Reconstruction	Tomo 2	Reconstruction	Tomo 3	Reconstruction	Tomo 4	Reconstruction

With MAMMOMAT B.brilliant	Tomo 1	Tomo 2	Tomo 3	Tomo 4			
		Background Reconstruction	Background Reconstruction	Background Reconstruction	Background Reconstruction		

Save time with **<5 second sweep** and **no wait time** for reconstruction
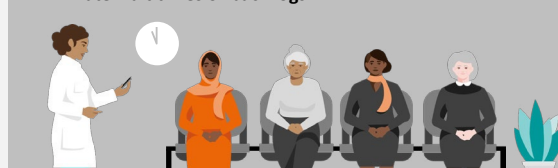
What can you do with this time?

Spend more time with your patients

OR

Eliminate wait times or back logs

Automatic Pre-fetching Priors: More time to do what matters

Reduce administrative tasks performed by technologists to free up time to do what matters most: taking care of the patient.
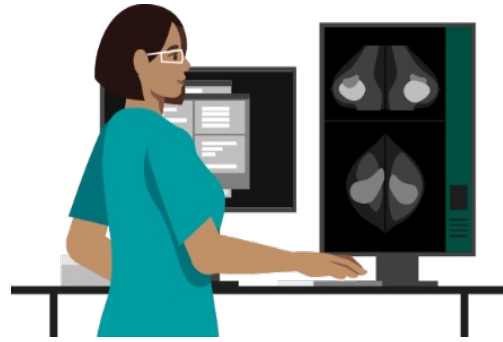
Reduce unnecessary imaging and dose
Instantaneously assess patient positioning and end the acquisition early to minimize patient dose and acquisition time when positioning is not optimal.

Consistent volumetric results in breast density classification
Automate and integrate breast density assessment for objective classification into the radiologist's workflow using Insight BD software for a consistent, objective, breast density classification. Insight BD provide volumetric assessment of the patient's breast density at the gantry, immediately after taking an image, for fast and easy assessment.

• 100% Object classification

• 0 seconds delay in classification

• Improved process efficiency
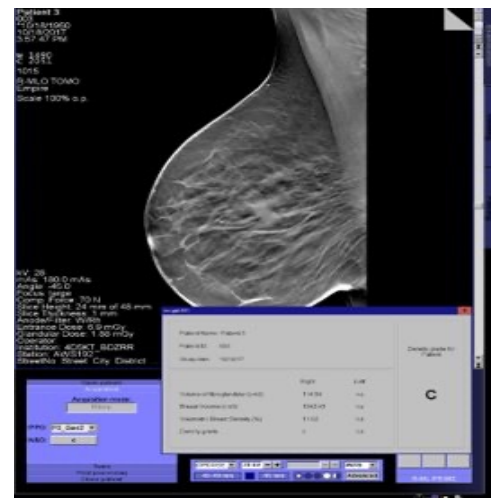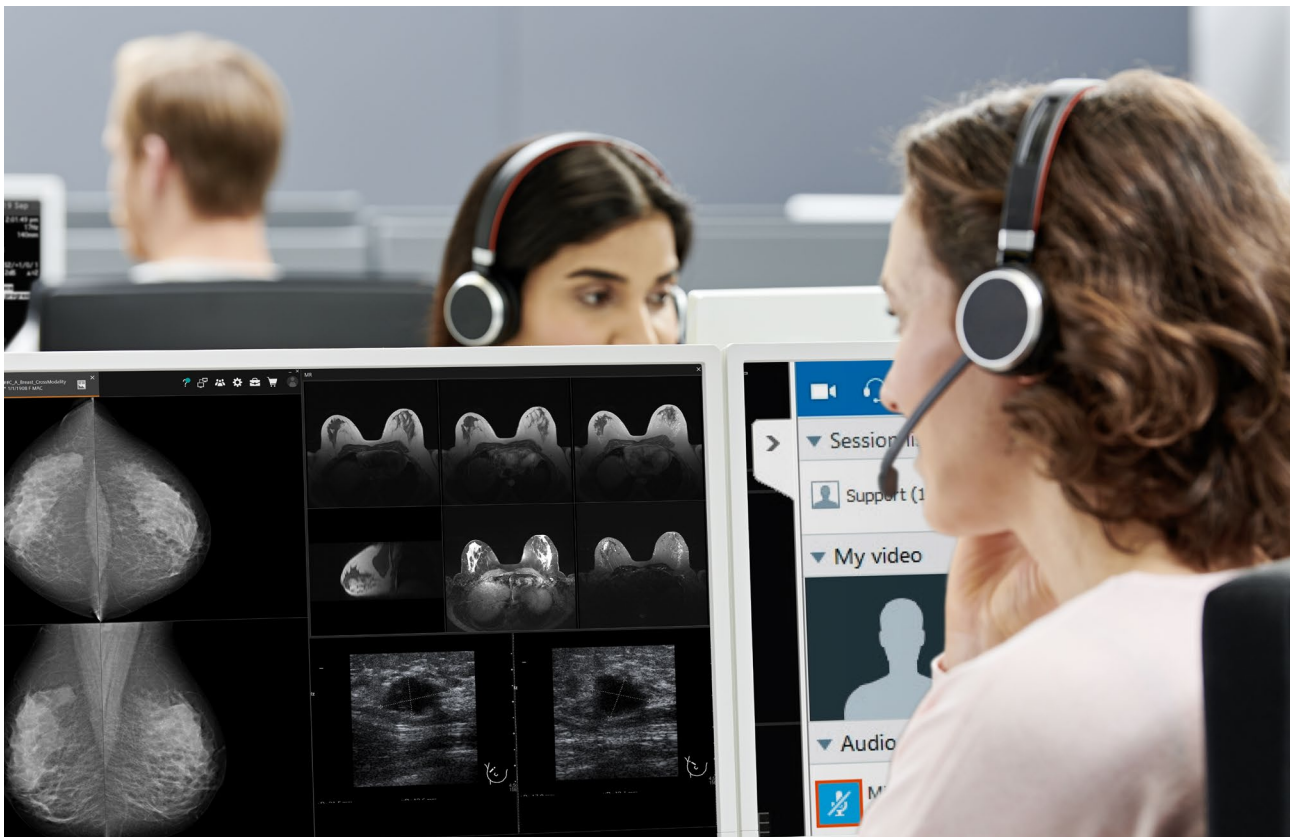
Benefit from committed experts delivering onsite and remote support to your MAMMOMAT B.brilliant.

Service offerings for smooth daily operations

Today, the service experience goes above and beyond pure maintenance. Service can make the difference to your daily operations and help you evolve. With our services, we are by your side whenever you need us. Siemens Healthineers specialists are available for instant remote assistance 24/7 in every time zone. With our presence in more than 150 countries around the globe, we're always close to our customers.

- **Hardware maintenance**
  Maximize equipment performance and optimize uptime at defined costs with the service contracts Performance Plans.

- **Software updates**
  Perform to your full potential today and be ready for what's coming next with the Evolve Program.

- **Staff training**
  We care for your knowledge and develop your skills along your MAMMOMAT's lifecycle.

Customized business and financial models

Flexible investment to match your needs
MAMMOMAT B.brilliant offers a modular and future-ready system design that evolves with you. For greater investment security, it integrates the latest technologies in one device – and allows you to start with a lower initial investment and upgrade as your needs grow.

Optimizing clinical workflows and processes
Enjoy access to innovative medical technology and equipment throughout the entire contract lifetime, so you can optimize your asset management and planning, and focus on patient care. In addition, our customized business and financial models can help you maintain your competitive edge and stay on top of your budgetary and enterprise needs.

MAMMOMAT B.brilliant

Women deserve fewer maybes

Women deserve answers

PlatinumTomo – 50 Degrees in 5 seconds
The benchmark for tomosynthesis image acquisition thanks to breakthrough technologies.

- **50° Wide-Angle Tomosynthesis**
  Leverage the highest depth resolution on the market[3]

- **Unique flying focal spot technology**
  Unparalleled in-plane resolution and acquisition speed[2]

- **Cutting-edge detector**
  Faster read-out time for higher image acquisition speed[2]

- **PREMIA Ultra HD image reconstruction**
  Our newest imaging algorithm aimed to provide artifact and noise reduction along with a customized image impression

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Insight 2D
The standard for synthetic mammograms

Insight 3D
The only rotating 3D mammogram

Customizable image impression for DBT, synthetic imaging, and FFDM
Work according to your preferences

Insight BD
Automatic and objective breast density assessment

Women deserve comfort

- **ComfortGuide Display**
  Make examination processes more transparent

- **ComfortMove**
  Independent tube for improved technologist ergonomics and increased patient comfort

- **Optimized face shield and a short scan time**
  Create more stability and comfort for patients

More confidence and comfort:

- One-click positioning
- QuickView
- OpComp
- PRIME and low dose DBT
- SoftComp Paddles
- Patient hand rest
- MoodLight

Women deserve diagnostic clarity

50° Wide-Angle Biopsy
Pinpoint precision for biopsies thanks to 50° Wide-Angle Tomosynthesis

Pre- and postfire tomosynthesis images
Rely on diagnostic information throughout the entire biopsy workflow

Needle Navigator
Perform biopsies with confidence

InSpect – Integrated specimen scanner
More time to focus on your patient during biopsy

TiCEM – Titanium Contrast Enhanced Mammography
Stay at the forefront of clinical developments

Women deserve access

Performance optimization
High patient throughput in screening with shorter image acquisition time

Unique service offerings
Smooth daily operation thanks to hardware maintenance, software updates, and staff training

Customized business and financial models
Evolve your system over time and futureproof your investment

Siemens Healthineers AG (listed in Frankfurt, Germany: SHL) pioneers breakthroughs in healthcare. For everyone. Everywhere. Sustainably. As a leading medical technology company headquartered in Erlangen, Germany, Siemens Healthineers and its regional companies are continuously developing their product and service portfolio, with AI-supported applications and digital offerings that play an increasingly important role in the next generation of medical technology. These new applications will enhance the company's foundation in in-vitro diagnostics, image-guided therapy, in-vivo diagnostics, and innovative cancer care.

Siemens Healthineers also provides a range of services and solutions to enhance healthcare providers' ability to provide high-quality, efficient care. In fiscal 2022, which ended on September 30, 2022, Siemens Healthineers, which has approximately 69,500 employees worldwide, generated revenue of around €21.7 billion and adjusted EBIT of almost €3.7 billion.

Further information is available at www.siemens-healthineers.com.

The outcomes and statements provided by customers of Siemens Healthineers are unique to each customer's setting. Since there is no "typical" hospital and many variables exist (e.g., hospital size, case mix, and level of service/technology adoption), there can be no guarantee that others will achieve the same results.

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