PRESS RELEASE

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Daily Quality Assurance in Radiation Therapy: PTW Advances Digital Workflows with Unicheck

Growing demands for patient safety and documentation, combined with time pressure, are driving the digitalization of daily quality assurance in radiation therapy. Freiburg-based dosimetry specialist PTW is responding to this development with Unicheck. The newly approved wireless, web-based system for automated daily quality assurance of treatment machines has been available since September 2026 and combines precise measurement technology with a digital, workflow-based approach.

Before the first patient can be treated, every radiation therapy department performs daily quality assurance (Daily QA) of its treatment systems. Daily QA ensures the precise and reproducible delivery of the prescribed dose, the safe operation of the treatment system, and accurate patient positioning. These daily checks make an essential contribution to patient safety and are an integral part of national and international quality standards.

In clinical practice, these high standards of quality must be met despite time and organizational constraints. The checks are usually performed in the early morning, and any delay has an immediate impact on the clinical schedule. Moreover, responsibilities change across shifts, and the checks must be documented strictly in accordance with defined work instructions. These instructions reflect a range of regulatory and clinical requirements. National standards, international test protocols, and internal clinical specifications define which checks must be performed and how the results must be documented. Although the procedures are repeated every day, they must always be carried out with consistently high levels of attention and care.

From Measurement to a Digital Process

Against this backdrop, the role of modern quality assurance systems is changing. In the past, the focus was on measurement; today, the underlying processes are moving to the forefront. “The challenge is not the measurement itself, but integrating quality assurance into everyday clinical practice in an efficient, standardized, and traceable way,” says Dr. Jakob Liebl, medical physicist and product manager at PTW Freiburg. “What is needed are solutions that support users while providing sufficient flexibility for different clinical requirements.”

Efficiency and Future Readiness as Key Requirements
To help clinics address these challenges, PTW has adopted a consistently digital approach with Unicheck. The solution combines modern, high-precision measurement technology with a web-based software platform and an IoT-enabled system architecture. This turns daily quality assurance into an end-to-end digital workflow. The software supports the planning, execution, evaluation, trend detection, and documentation of QA tasks on a single platform while taking local requirements into account. All relevant data, workflows, and administrative functions are available centrally and can be managed across roles and locations.

Particular emphasis is placed on future readiness. Clinical requirements, regulatory specifications, and IT environments continue to evolve. Its IoT system architecture and modern software technology make it possible to keep Unicheck up to date and add new functionality as needed. This allows the solution to adapt to changing clinical needs over the long term.

Rethinking Quality Assurance
For PTW, the digitalization of daily quality assurance is part of a broader development in radiation therapy. Beyond precise measurement technology, efficient workflows, transparent documentation, and adaptable systems are becoming increasingly important. Daily quality assurance is thus evolving from an isolated routine task into a connected process that brings together patient safety, efficiency, and future readiness. Solutions such as Unicheck show how digital technologies can support this transformation in everyday clinical practice.

For more information, visit https://ptwunicheck.com/.

About PTW:
PTW is a global leader in high-precision dosimetry solutions for radiation therapy, diagnostic radiology, and metrology. Founded in 1922, the German company is one of the pioneers in medical radiation measurement and has helped advance patient safety in modern radiation medicine for over a century. PTW technologies and services enable clinical radiation experts in more than 160 countries to precisely monitor complex clinical radiation equipment. The company also operates one of the oldest and largest accredited calibration laboratories for ionizing radiation and founded the DOSIMETRY SCHOOL to foster knowledge exchange in clinical dosimetry. With twelve international subsidiaries and 450 employees worldwide, PTW continues to shape the future of dosimetry.
For more information, visit https://www.ptwdosimetry.com/.

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Image Material:

(Please note: Screen resolution only.)



Image 1: Before the first patient can be treated, every radiation therapy department performs daily quality assurance of its treatment systems.

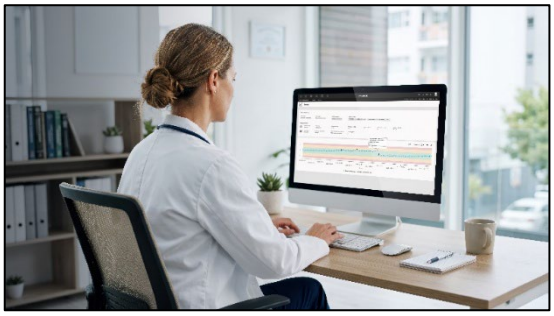


Image 2: Digital workflows support daily quality assurance in radiation therapy and help ensure that checks are performed efficiently, traceably, and in a standardized manner.



Image 3: Unicheck, the newly approved wireless, web-based system for automated daily quality assurance of treatment machines, has been available since September 2026.

Image credits: PTW Freiburg GmbH

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