

# AQUA™



Data-backed Assurance

# Departmental machine quality management

As radiation therapy technology becomes more sophisticated and treatments increasingly complex, there is a growing quality assurance burden within clinics to ensure that patient treatments are safe, efficient and effective. At the same time, tighter regulatory scrutiny and increasing workloads place additional demands on already stretched resources.

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**Recognizing the need for more streamlined QA workflows, Elekta has introduced AQUA—a powerful quality management tool that integrates, collates and displays machine QA processes across the entire radiation therapy department.**

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Going beyond simple device QA, AQUA integrates key elements of the treatment delivery environment meaning that wider compliance requirements can be easily verified and reported.

## **AQUA is a comprehensive machine quality management solution that:**

- Simplifies QA processes across the entire workflow
- Frees staff and resources
- Enhances departmental efficiency
- Maintains system performance records in support of QA compliance

# Centralizing QA compliance across the entire hospital network

An open, web based QA management solution, AQUA provides easy monitoring and maintenance of all machine QA programs across the clinic, including multiple sites, allowing centralized data management and remote access.

AQUA manages data from multiple devices, regardless of vendor, including:

- Linear accelerators
- Quality assurance equipment
- Brachytherapy equipment
- Gamma Knife® and other radiosurgery machines
- CT simulators and other imaging systems

Providing a full suite of workflow-oriented machine QA tasks, AQUA monitors regular scheduled tests to confirm that machines are operating within user-defined specifications.

With real-time alerts to areas that require immediate attention, AQUA detects machine operating specification and performance issues before they affect clinical service, increasing confidence in machine quality and safety.

## Standardize and streamline workflows

AQUA manages routine machine QA procedures throughout the department, providing workflow optimization and improved operational efficiency.

The AQUA workflow manager provides a daily 'To-do' list and guides staff through daily quality assurance tasks.

AQUA provides a single, access-controlled interface for scheduling, monitoring and reviewing all machine QA procedures and tasks. Process integration and automation simplifies QA requirements and streamlines workflows, increasing standardization and generating significant time savings.

The screenshot displays the AQUA Dashboard interface. At the top, there is a navigation bar with the AQUA logo and 'INSTITUTION NAME'. Below the navigation bar, there is a 'Dashboard' section with a 'Machine Group' dropdown menu set to 'All linacs' and an 'Enable Refresh' checkbox. The main content area features a table with the following columns: Machine, Machine Status, Mandatory, Compliance, and Performance. The table lists five machines: SA04, EA05, NA09, NA11, and WW15, all of which are in 'Working - Clinical' status. The Mandatory and Compliance columns show progress bars, and the Performance column shows green bars indicating good performance.

Machine	Machine Status	Mandatory	Compliance	Performance
SA04	Working - Clinical	Yellow	Yellow	Green
EA05	Working - Clinical	White	White	Green
NA09	Working - Clinical	White	White	Green
NA11	Working - Clinical	White	White	Green
WW15	Working - Clinical	White	White	Green

The AQUA Dashboard provides a real time, comprehensive overview of machine status which can be accessed remotely

# AQUA has proven performance in a clinical setting

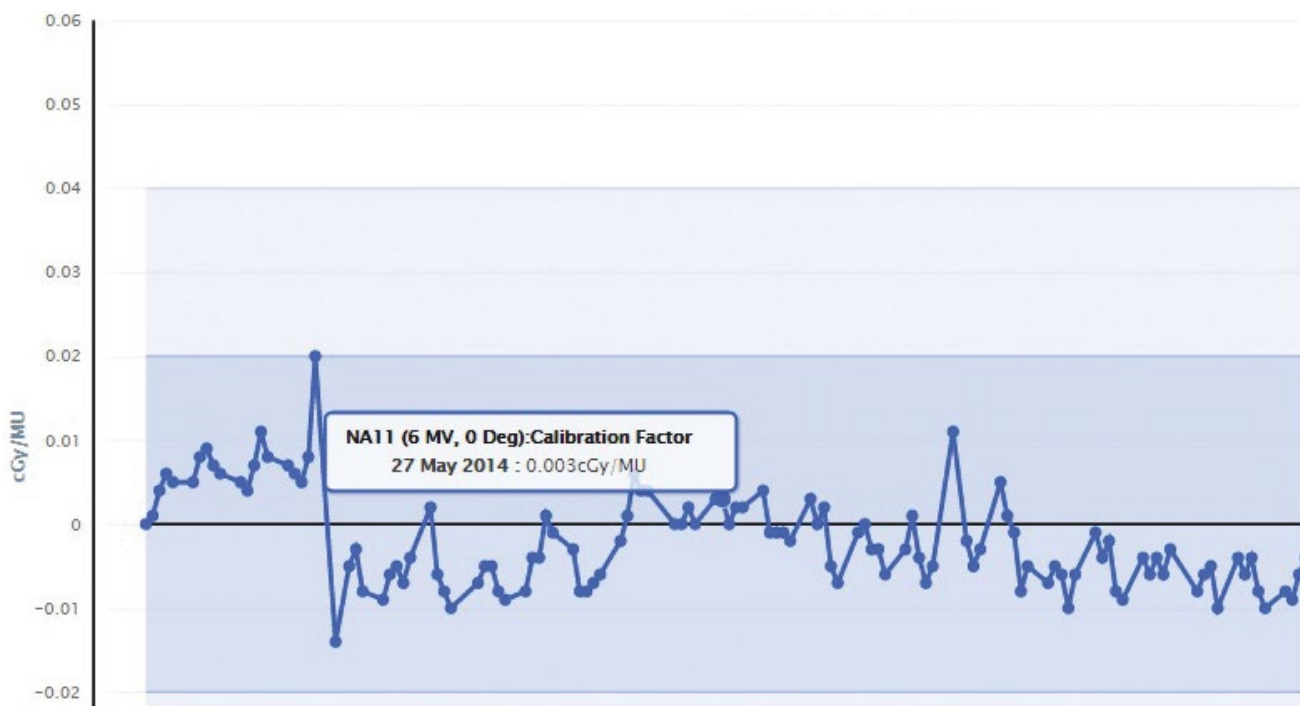
## Proven performance

AQUA was developed in collaboration with Princess Margaret Cancer Centre to meet practical day to day machine QA requirements.

Based on a system that has been in routine operational use since February 2012 and connecting over 20 machines, AQUA has proven performance in a clinical setting.

## Protect the whole treatment delivery environment

AQUA not only monitors treatment delivery devices and associated equipment. Key elements of the bunker itself—such as treatment room door interlocks, panic panel and crashbars, intercom and video monitors, stereotactic interlocks, radiation area monitors and beam-on indicators (control and room warning lights)—are covered, too.

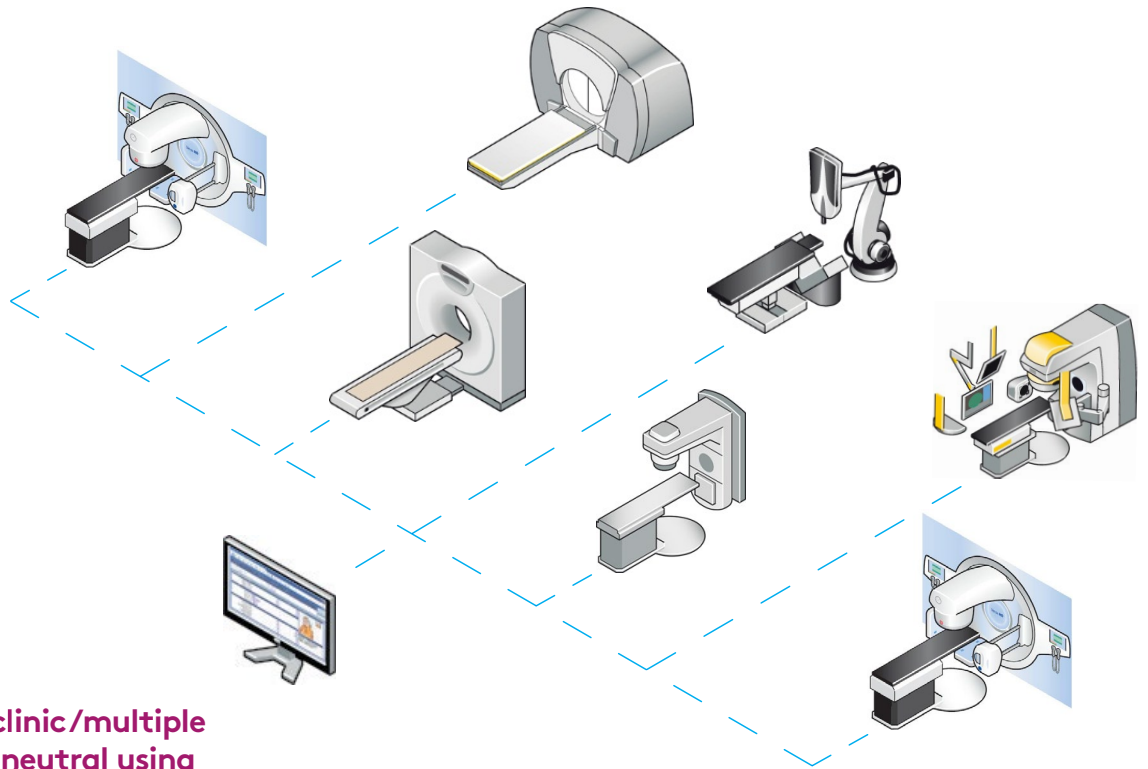


AQUA Review is a powerful analytical tool that allows you to retrieve, view and plot historical data with ease.

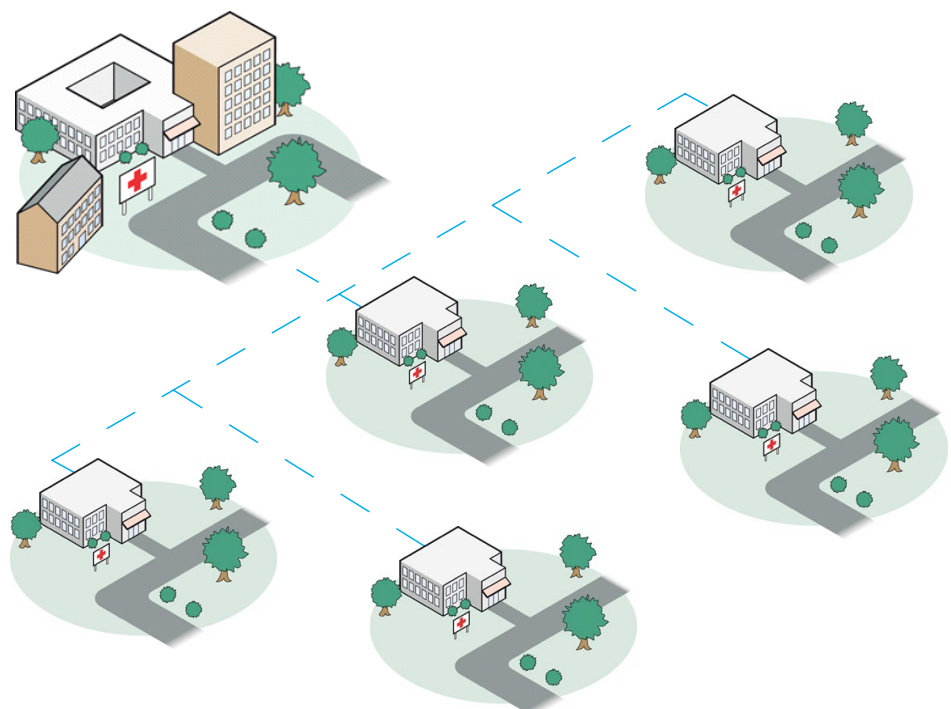
## Working towards an integrated future

The vendor-agnostic approach and the ease of test customization means new devices can be easily integrated into the AQUA ecosystem—within a single clinic or across a distributed hospital network.

Increasing integration over time, especially with Elekta treatment delivery systems, will facilitate further improvements in workflows and compliance across the entire clinic.



**Within a single clinic/multiple devices (vendor neutral using customizable APIs)**



**Within a network of clinics**

# AQUA alerts and directs physicists to machine QA-related compliance issues

## Save time and resources

At a glance, the AQUA dashboard allows physicists to monitor the QA status of equipment across the department, including:

- Tests that have been performed
- Tests that are due
- Results of recent tests
- Trends relating to a specific QA procedure
- Current machine state

AQUA alerts and directs physicists to compliance issues as soon as they occur, ensuring that corrective action can be taken immediately and so, reducing machine downtime.

By automating machine quality management procedures, AQUA can be configured to perform core daily QA tests in as little as 30 minutes.

Plus, AQUA can scale to expanding locations, equipment and procedures without the need for additional staff.

## Assist regulatory compliance

AQUA machine QA protocols are based on internationally recognized professional guidelines (AAPM TG142 and TG51, IAEA Technical Report Series No.398) designed to ensure treatment quality and compliance. In addition, AQUA provides complete flexibility to customize or create additional test protocols to meet individual departmental requirements.

The data analysis and monitoring tools within AQUA allow a wide range of reports to be generated, stored and retrieved at the click of a button— including trend analyses and audit reports.

## Disclaimers

AQUA is not available for sale or distribution in all markets. Please contact your local Elekta representative for further information.

Event List			
Event Time	Type	Machine Status	Comments
September 16, 2014 4:07 PM	Return to clinical service	 Working - Clinical	jghfjk
September 16, 2014 4:06 PM	Emergency servicing	 Out Of Service	mlo error
September 16, 2014 3:48 PM	Return to clinical service	 Working - Clinical	jdff
September 16, 2014 3:47 PM	Emergency servicing	 Out Of Service	mlo error
September 16, 2014 11:03 AM	Return to clinical service	 Working - Clinical	jghj
September 16, 2014 11:02 AM	Emergency servicing	 Out Of Service	mlo fault
September 15, 2014 4:42 PM	Return to clinical service	 Working - Clinical	jghdg
September 15, 2014 4:41 PM	Emergency servicing	 Out Of Service	mlo failure

AQUA Status shows you the entire service history for each device and allows easy communication of changes in machine status as they occur.

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Elekta Care is designed to help you maximize the use of your Elekta technology, so you can focus on your patients and your practice.

**Professional Services**



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Elekta Care™ supports you from startup through your product's lifecycle with comprehensive options from education, training and upgrades to solutions allowing you the highest uptime and improved operational efficiency.

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**[elekta.com/elektacare](http://elekta.com/elektacare)**

**We are healthcare technology innovators, specializing in radiotherapy treatments for cancer and brain disorders.**

We help clinicians to improve patients' lives through our forward-thinking treatment solutions and oncology informatics, creating focus where it matters to achieve better outcomes.



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