IQM

Integral Quality Monitor

Fingerprint your treatment beam

Real-time assurance

The Integral Quality Monitor (IQM) is an independent solution for real-time Patient QA and the ultimate patient safety device. It fingerprints your treament beam to provide you with real-time assurance, significant time savings and verification results you can trust.

It's the first radiation therapy verification system available on the market that monitors the delivered treatment while comparing it to the planned treatment—in real time. IQM independently checks every leaf position at every segment of every beam, enabling you to detect and act on even the smallest errors during treatment.
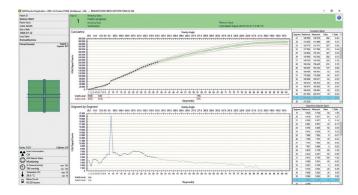
IQM provides:
- Real-time verification and alerts
- Independent measurements
- QA during patient treatment

The future of Radiation Therapy Verification is here

Cancer care is evolving. More patients—combined with more complex treatments—stretch existing resources and there is a growing need for simplicity and efficiency in quality assurance. IQM meets this need with one fully automated QA approach for daily Fraction QA, pre-treatment Plan QA and various Machine QA tasks. IQM helps you deliver safe and efficient treatments while minimizing staff time spent on QA and non-treatment machine time.

The IQM control room monitor displays three levels of real-time
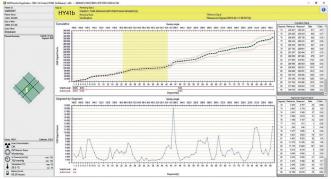alerts using an intuitive traffic light system:

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Tolerance, Watch and Action.

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Tolerance

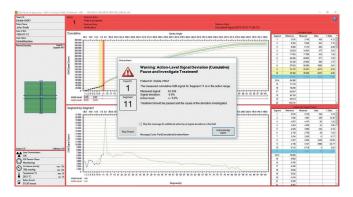

All signals are within the tolerance corridor and
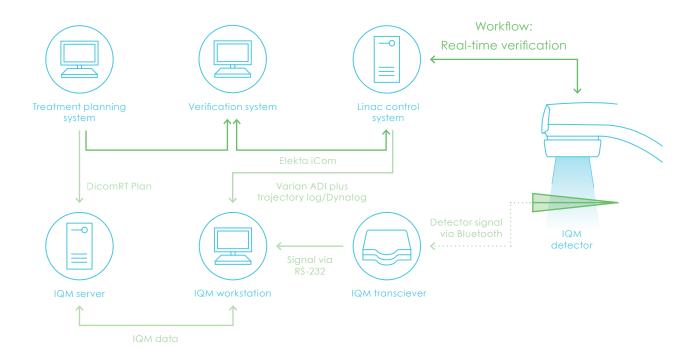treatment delivered successfully

Watch

One or multiple segments are not
delivered as expected

Action

IQM issues a clinical alarm if treatment was delivered
outside the acceptance criteria

Significant time savings

Workflow:
Real-time verification

Treatment planning system

Verification system

Linac control system

Elekta iCom

DicomRT Plan

Varian ADI plus trajectory log/Dynalog

Detector signal via Bluetooth

IQM detector

IQM server

IQM workstation

IQM transciever
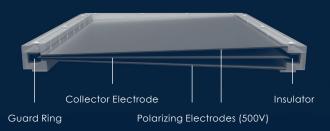
Signal via RS-232

IQM data

Fully automated, in the background, IQM can provide significant time savings for the QA team and the whole radiation therapy department.

IQM takes less than ten seconds to set up and, once in place, is seamlessly integrated into the treatment workflow. No user interaction is needed to run the test. IQM doesn't require a verification plan or post-processing and there is no calibration or repositioning needed between treatments. It is fully automated, verifying in the background in real time during treatment—allowing you to focus on analyzing the results.

Save time with IQM:
- Fast installation and setup
- No user interaction needed
- Seamlessly integrated

Verification results you can trust

Collector Electrode

Insulator

Guard Ring

Polarizing Electrodes (500V)

Accurate by design, the innovative IQM detector technology covers every field size and shape to detect even the slightest variation in real-time and provide a new level of significance.

The IQM detector technology combines the signal stability and reproducibility of a large ionization chamber with the spatial accuracy and sensitivity of film. The simple, robust and stable design provides a 100% active detection area. This means that each beam segment creates a unique and highly specific signal from any angle, making it ideal for advanced

treatment techniques. The smaller the beam segment, the higher the sensitivity for any possible deviation. Even the smallest beam segments are measured with accuracy and precision at any off-axis position.

IQM delivers:
- Unique beam verification technology
- Unrivaled error sensitivity
- Wide dynamic range
- Continuous spatial accuracy
- Reliable reproducibility

iRT was founded to introduce the Integral Quality Monitor (IQM) System to the Radiation Therapy community.

IQM represents a paradigm shift in Radiation Therapy verification: fully automated, real-time verification of all complex treatment techniques.