



# myQA<sup>®</sup> iON

The Patient QA Environment for Proton Therapy\*

## Web-based Patient QA Environment for Proton Therapy

myQA iON is the unique Patient QA software solution for efficiency, accuracy and safety of recurrent QA checks in Proton Therapy.

myQA iON significantly reduces the time needed for patient QA: Task-based workflow, automation and the latest web software technologies increase QA efficiency while ensuring patient treatment safety.

The software uniquely combines three advanced patient QA verification solutions in one environment – enabling the optimal patient QA for each individual case.

### QA Accuracy - 5 Times Faster! \*\*

- **QA Automation:**  
Automatic data retrieval and background processing.
- **QA Efficiency:**  
Save time through task-based workflow, automation, and log file QA.
- **QA Flexibility:**  
3 advanced patient QA tools in one platform
  - Monte Carlo independent 3D dose calculation.
  - Unique PT log file 3D reconstruction.
  - Dose output measurements with the MatriXX detector.



### Independent Monte Carlo

- ✓ Verify TPS dose vs. independent Monte Carlo dose via 3D gamma algorithm.
- ✓ One Click workflow: Simply send the TPS DICOM data to myQA iON.
- ✓ Automatic Monte Carlo calculation in the background.
- ✓ High accuracy with sophisticated Monte Carlo dose map computation.
- ✓ Easy integration in your routine QA workflow.



### Measurement Flexibility

Measurement-based patient QA alternatives:

#### 1) Machine Log File 3D Analysis

- ✓ Verify TPS plans and their correct delivery.
- ✓ Skip time-consuming QA device setup.
- ✓ Reconstruct delivered dose maps with Monte Carlo.

#### 2) MatriXX Detector Measurements

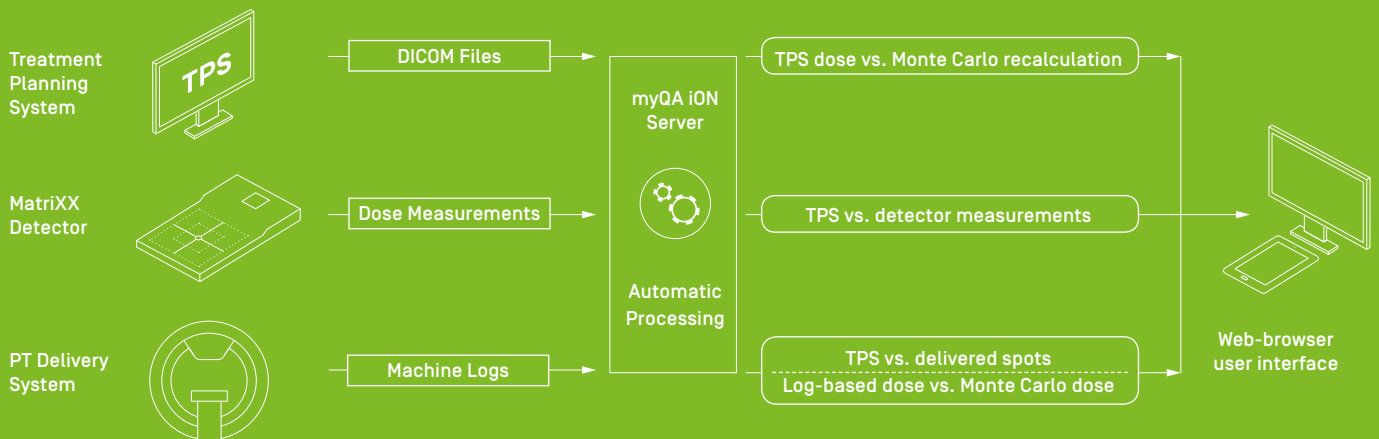
- ✓ Import of MatriXX measurements and analysis of real dose at isocenter.



### Workflow Automation

- ✓ Automatic machine log file retrieval.
- ✓ Plan queueing and Monte Carlo processing automatically in the background.
- ✓ Automatic updates of the QA analysis results in the patient interface.
- ✓ Automatic E-mail notification system: User information in case of detected errors or warnings.

## myQA iON Combines 3 Advanced Patient QA Solutions in One Environment



\*\* A patient QA survey amongst 39 experienced medical physicists at Proton Therapy centers determined an average 80% time saving with myQA iON compared to traditional detector based patient QA.



*The ability to automate our patient QA, and the flexibility to use irradiation logfiles, real dose measurements, and Monte Carlo secondary recalculations in one system will bring us to a new level in PT treatment plan QA efficiency and accuracy.*

**Zuofeng Li, DSc**

Physics Director, University of Florida Health Proton Therapy Institute  
Jacksonville, FL, USA

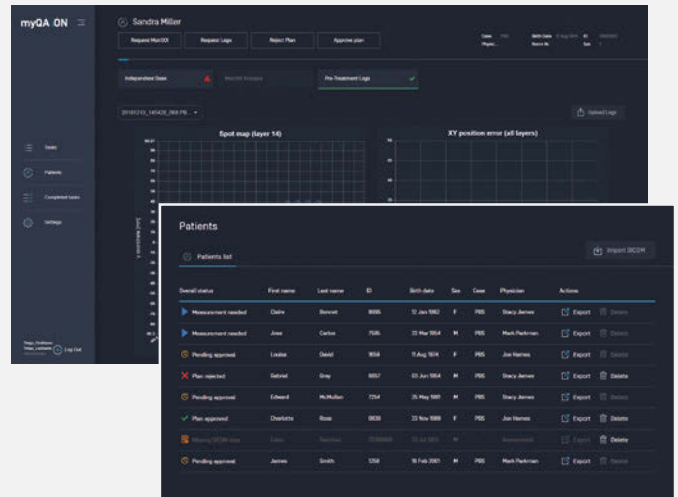
## Ultimate Workflow Efficiency & Time Saving

### Tasked-Based Workflow Manager

- Five times faster patient QA\*\*
- Complete QA status accessible in a comprehensive task based overview
- Schedule tasks, due dates and staff assignments
- Minimize setup time by automatically grouping the identical tasks

### Patient Manager

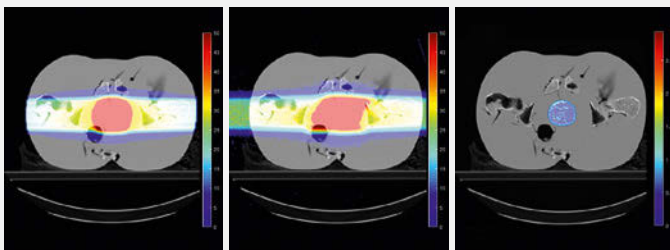
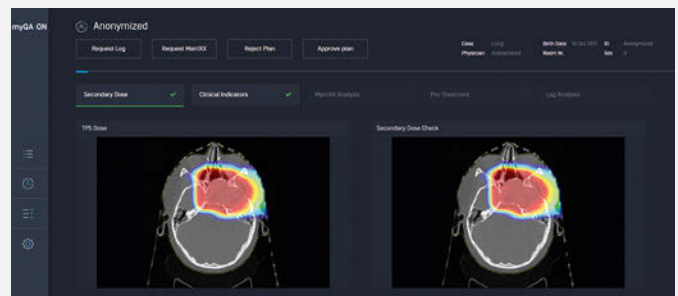
- Gain your clear and easy QA status overview for each individual patient



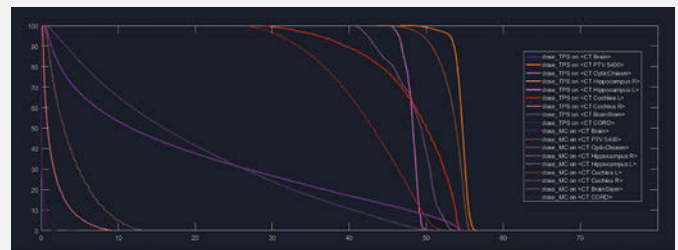
## Ultimate QA Accuracy

### 3D Monte Carlo Analysis

- Compare the TPS dose with an independent Monte Carlo dose
- Fully Automated independent Monte Carlo dose computation
- 3D gamma analysis and difference dose map



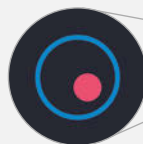
Comparison of a prostate case. TPS plan (left), Monte Carlo reconstruction (center). Gamma verification on the right.



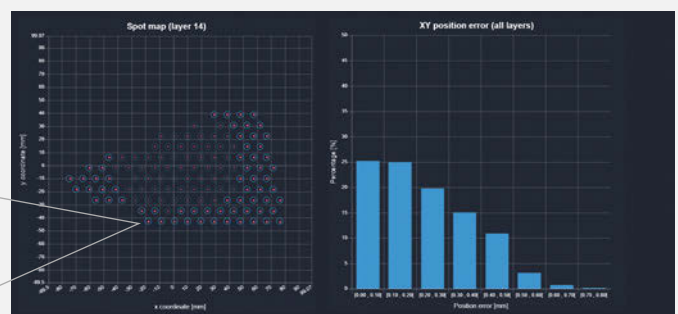
DVH verification of the TPS dose as well as the Monte Carlo dose. Easy comparison with display of both DVHs including point-by-point comparison.

### 3D Log Analysis

- 3D dose computation based on the actual delivery
- Verify each treatment fraction, not just pretreatment
- Track the cumulative delivered dose
- Simple visualization of spot delivered



Comparison of spot position for the TPS (blue circle) vs. delivered spot (red dot).

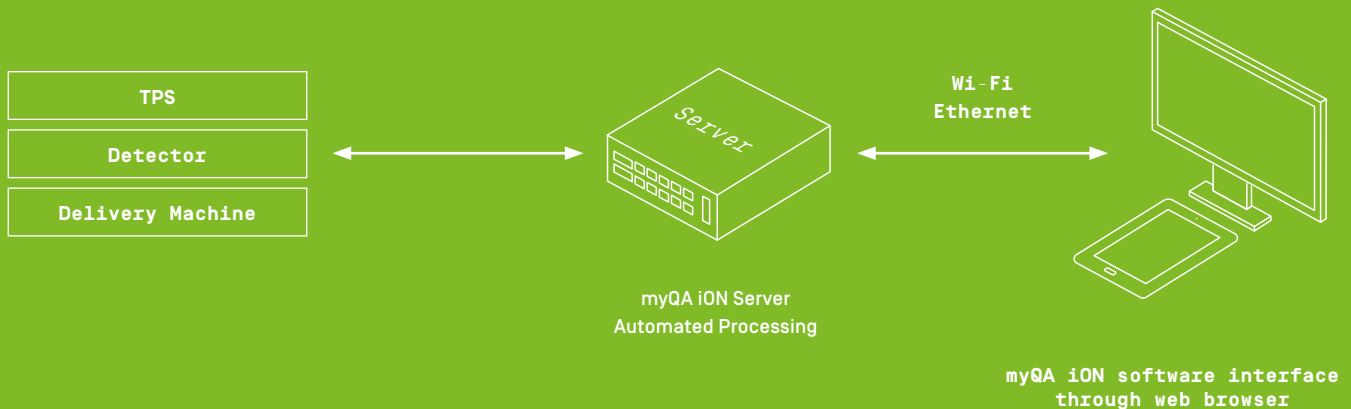


Histogram of position error between TPS vs. delivered spot.

# Network Access – Patient QA Anytime and Anywhere

The web-client software enables easy and fast integration into an existing IT infrastructure. Furthermore, you can execute tests and review your results on any device connected to the hospital network.

PROTECT +  
ENHANCE +  
SAVE LIVES



## Compatibility

- Monte Carlo dose calculation and MatriXX detector measurements are supported for all PT machine providers.
- Log file QA supported for IBA Proton Therapy treatment centers [Proteus One and Proteus Plus]
- Pencil Beam Scanning plans, with or without range shifter
- All treatment planning systems following the DICOM standard

## Software Specification

The myQA iON software and central database can be installed on a physical or virtual server and is compatible with Windows® or Linux server operating system.

myQA iON application access through the Google Chrome web browser from any computer connected to the hospital internet / intranet.

## Hardware Specification

myQA iON does not require proprietary hardware. The following computer hardware is recommended to run myQA iON: 24-core / 2.0 GHz processor, 32 GB RAM, two 2 TB hard drives.

## Monte Carlo Specification

Monte Carlo computation expected in less than 1 minute for a standard PBS plan with 10 million protons simulated. Please find more information under [www.openmcsquare.org](http://www.openmcsquare.org)

myQA iON\_Rev1\_0119\_E | © IBA 2019 | All rights reserved | Manufacturer: IBA Dosimetry GmbH.

Technical specifications and product features are subject to change without prior notice.

\* myQA iON is currently not available for sale in the USA. The product may not be available in your area.

For availability, please contact to your local IBA Dosimetry Sales organization.

## IBA Dosimetry

Integrated Quality Assurance

Europe, Middle East, Africa | +49-9128-6070

North America and Latin America | +1-901-386-2242

Asia Pacific | +86-10-8080-9288

[dosimetry-info@iba-group.com](mailto:dosimetry-info@iba-group.com) | [iba-dosimetry.com](http://iba-dosimetry.com)

[twitter.com/ibadosimetry](https://twitter.com/ibadosimetry)

[linkedin.com/company/iba-dosimetry-gmbh](https://www.linkedin.com/company/iba-dosimetry-gmbh)

