Patient QA efficiency and accuracy
through high-resolution measurements, automation and prediction

myQA® iON

DOSIMETRY

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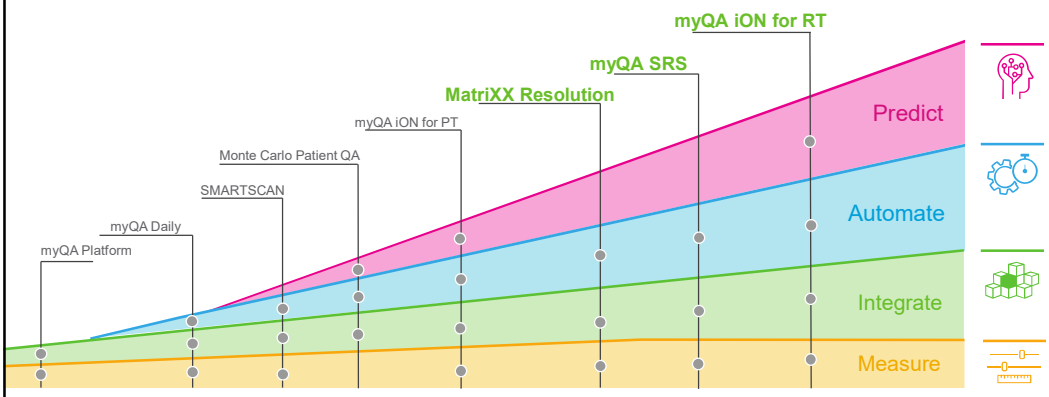
Innovation and Evolution of Quality Assurance



Find out more

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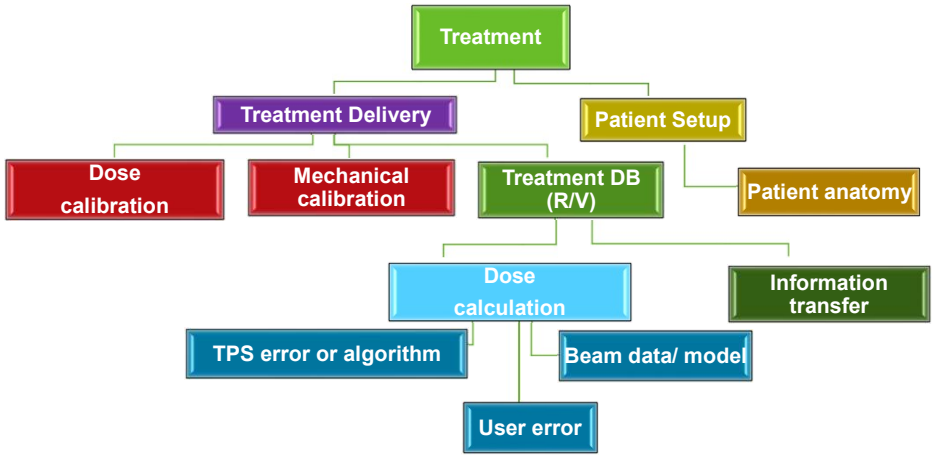
Errors and Plan QA



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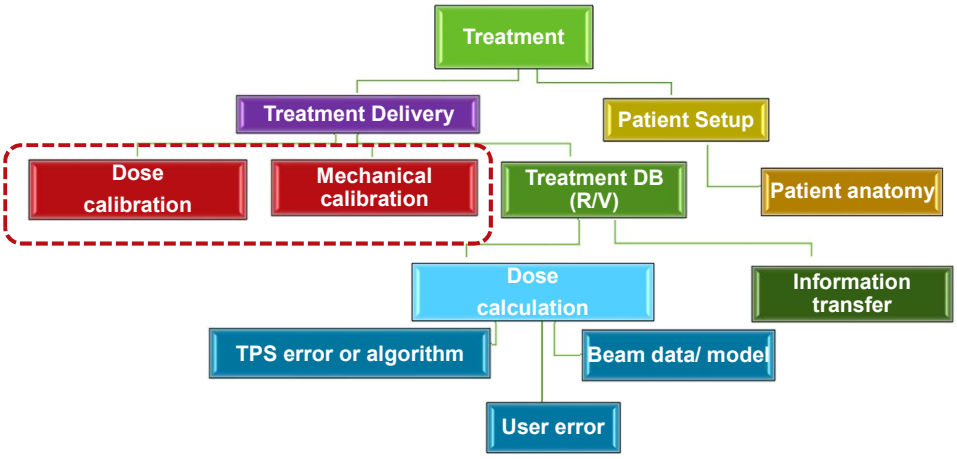
Errors and Plan QA



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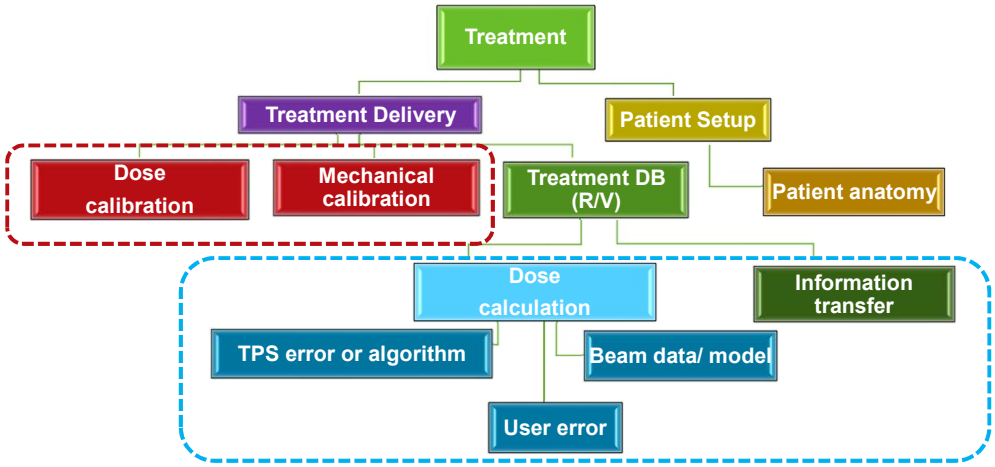
Errors and Plan QA



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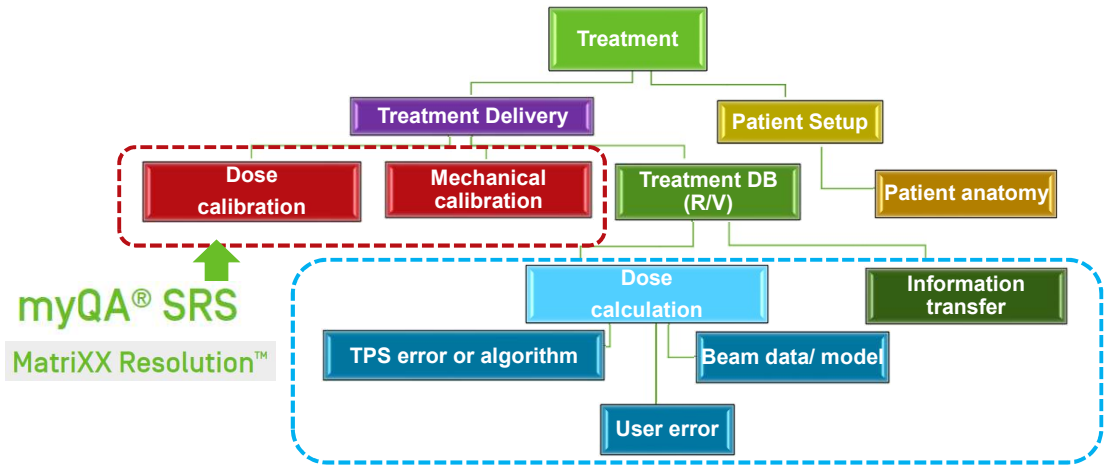
Errors and Plan QA



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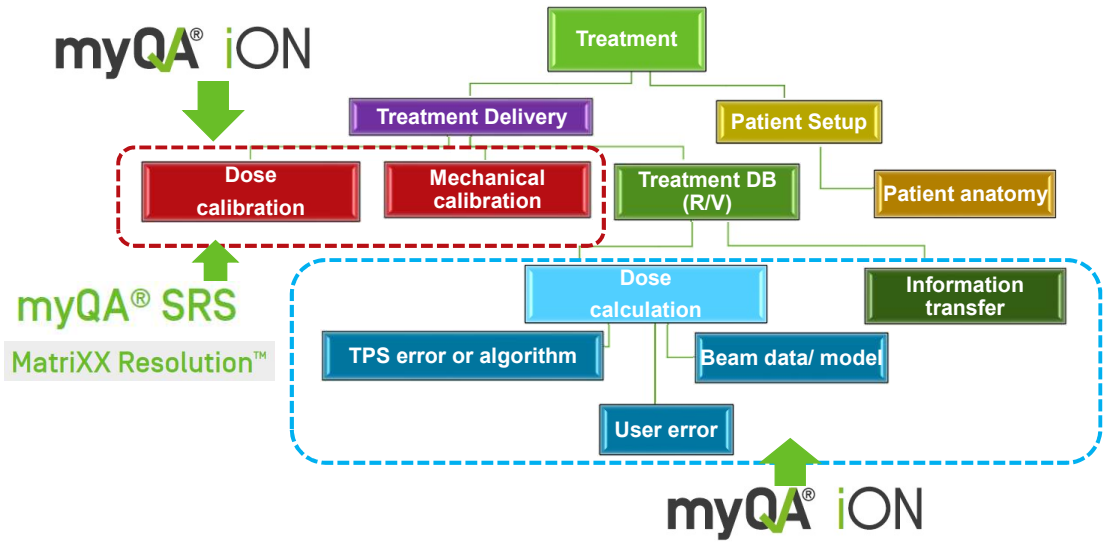
Errors and Plan QA



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Challenges with today's Patient QA

Time Consuming
- Tedious process
- Lengthy measurement workflows

Complexity / limited Clinical Impact
- Results difficult to interpret
- Unclear clinical relevance
- Unclear source of error

No Fractional QA
- Only pre-treatment QA
- Lack of QA for adaptive

Island Solutions
- Many different solutions
- One Patient QA tool for all cases

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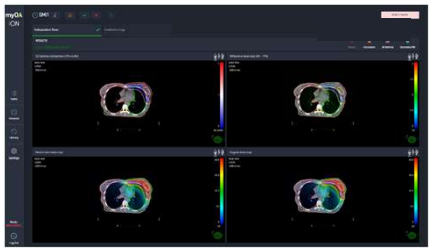
RT Patient QA Quality Management

Accuracy

- **Better patient QA decisions, focus on clinical relevance.**
- **Monte Carlo: best in class accuracy Monte Carlo.**
- **Log: QA from pre-treatment until the last fraction.**

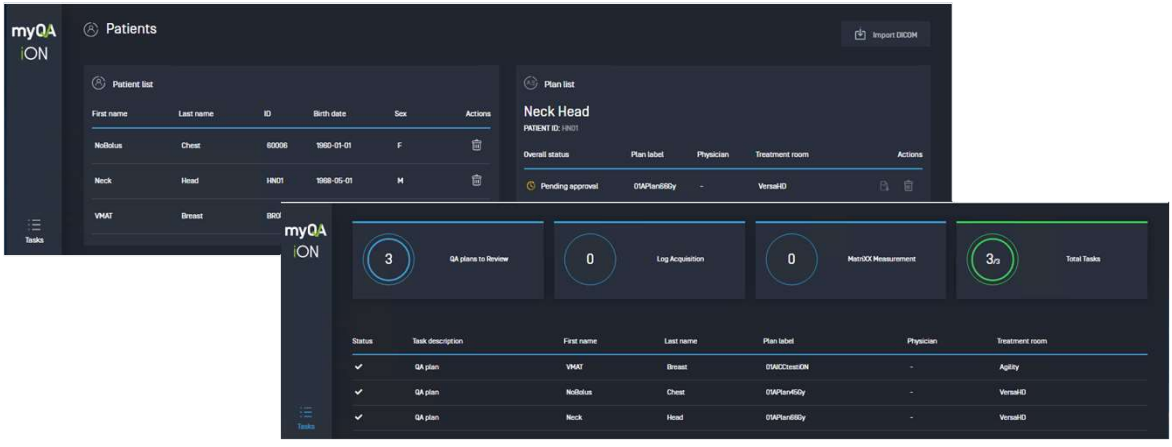


Efficiency

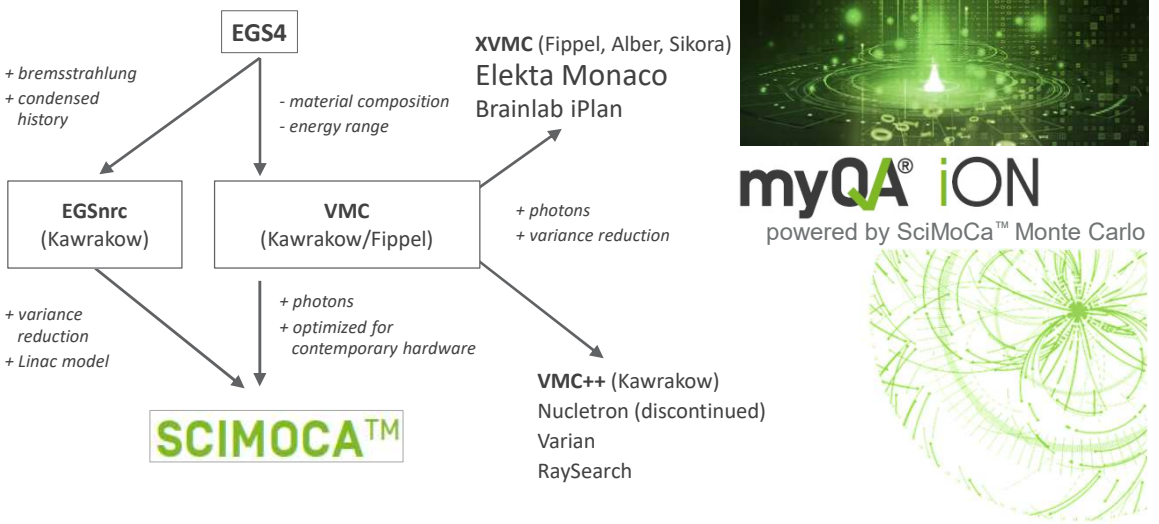
- **Simplifies and accelerates patient QA processes**
- **Frees physics times and linac resources.**
- **Enhances department efficiency and treatment safety.**

Workflow efficiency

- **Task-based QA:**
  - keep overview
  - optimal QA workflow management

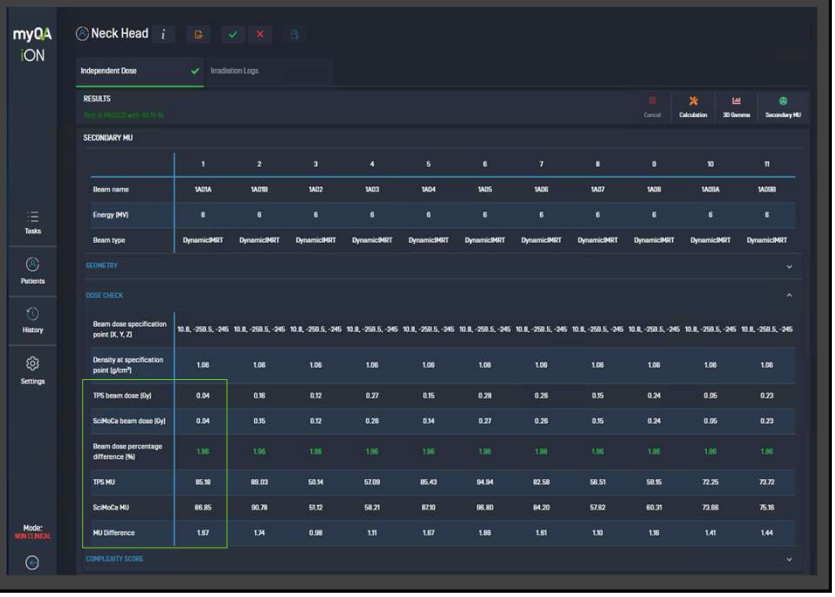


Monte Carlo dose calculation and plan QA



Secondary dose and MU verification

- Both MU and dose check
- Beam review



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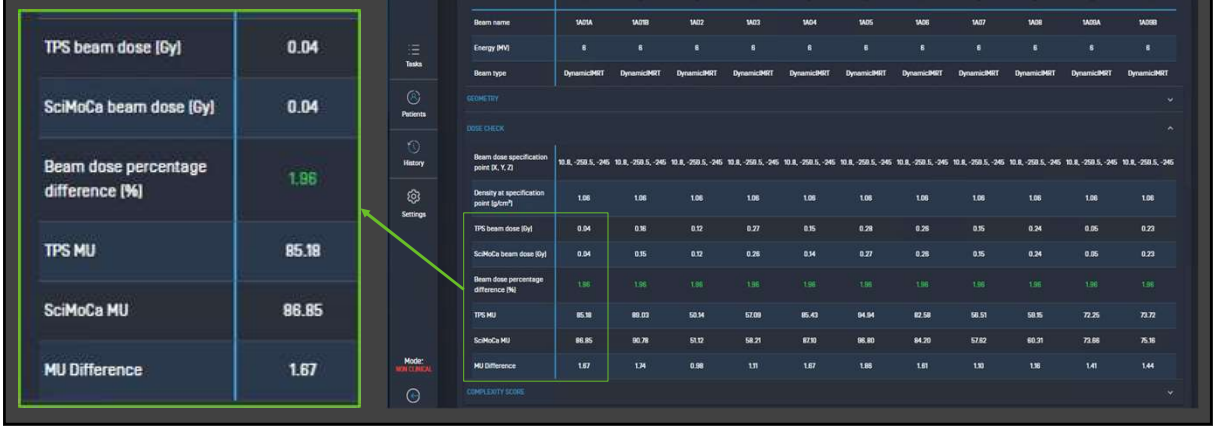

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Plan complexity scores

- How challenging is to deliver the perfect plan?
- Complexity scores correlate with gamma pass rates and MLC performance

(JM Park et al, Y Wang et al, C McGarry et al)

- Easily identify challenging beams
  - For your linac
  - For your measurement-based QA
  - For your TPS dose calculation

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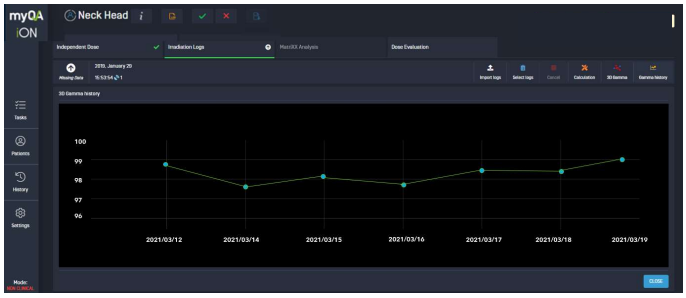
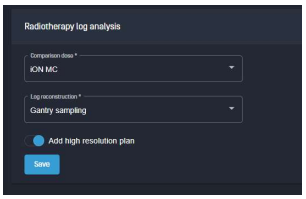
Measure your plan every day

- Linac logfile data before and during each treatment fraction
- Highest resolution measurements for jaws, MLC and gantry in real time
- Pinpoints the exact origin of errors
- Same Monte Carlo algorithm to exclude bias in comparison
- Multiple RT plan reconstruction options





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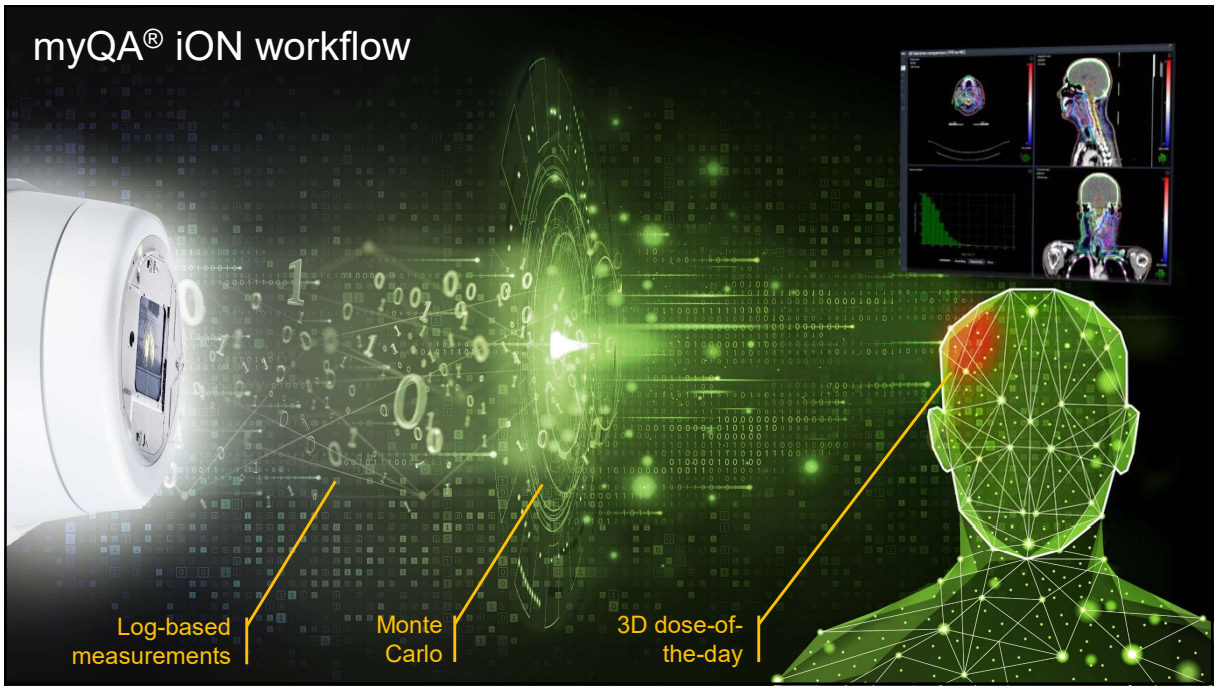

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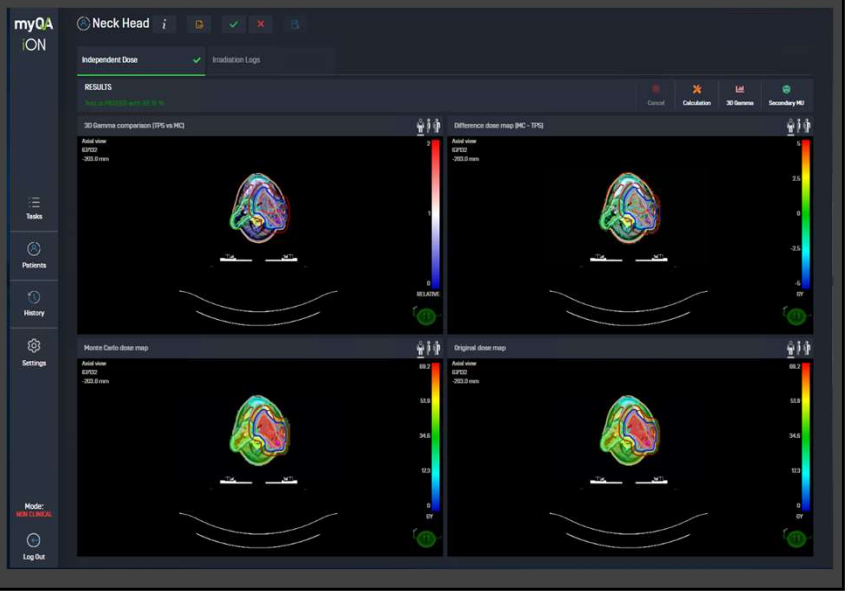
Plan Analysis - myQA® iON

- ✓3D dose and 3D gamma
- ✓In patient anatomy
- ✓Clinical relevance
- ✓Enables reviews with MD



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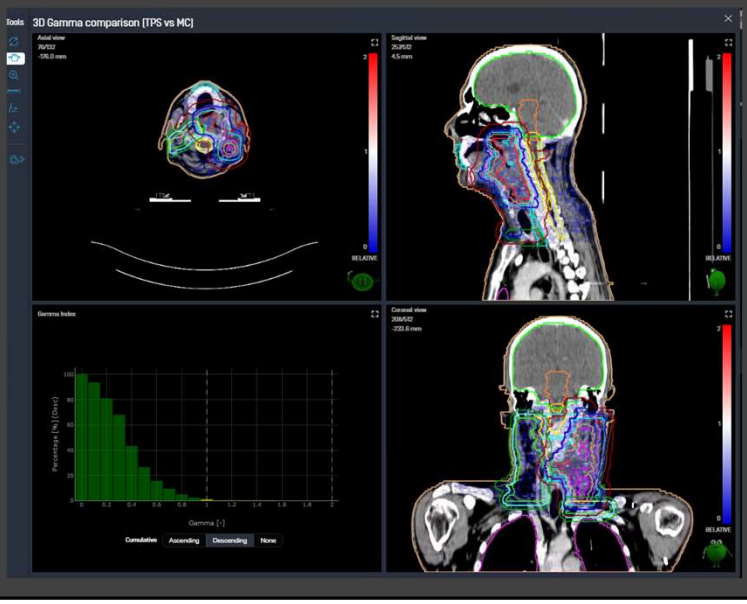

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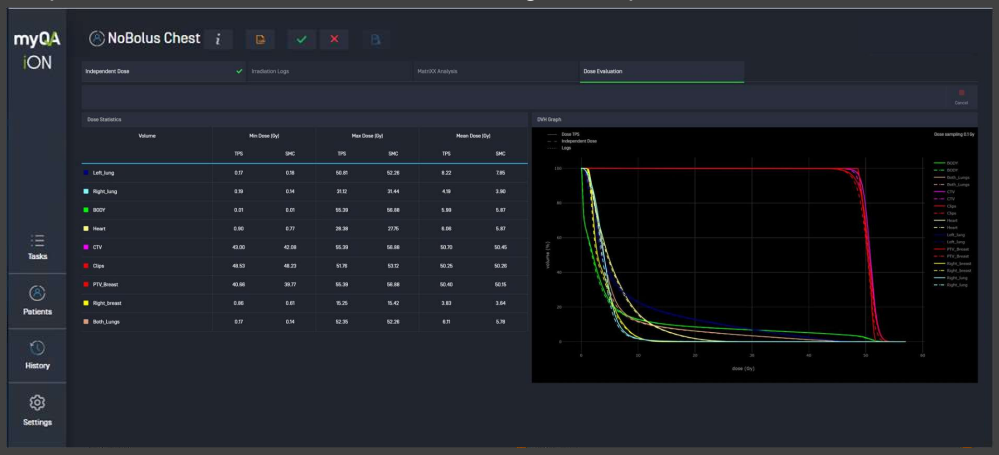
DVH - myQA® iON

- Evaluate QA plans like your TPS does
- Comparison vs Monte Carlo dose check or log-based plan



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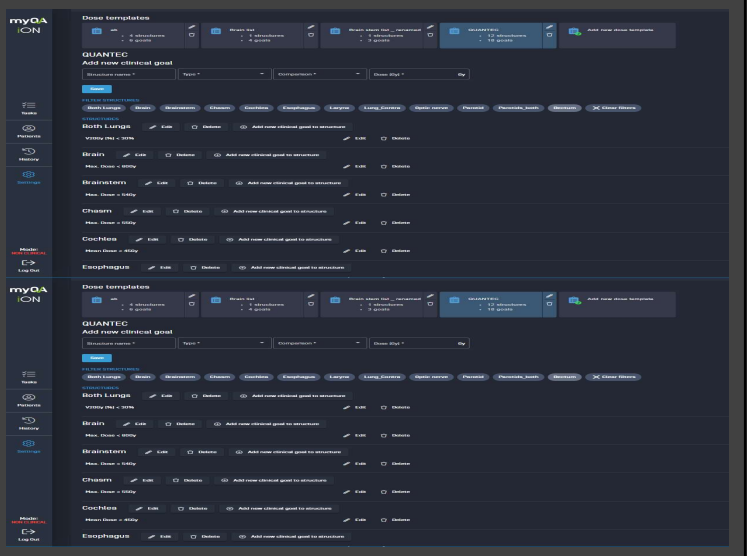
Clinical goals - myQA® iON

- Verify plan acceptance criteria independently
- Easily configurable dose templates
  - QUANTEC
  - AAPM SRS/SBRT
  - Institution-specific



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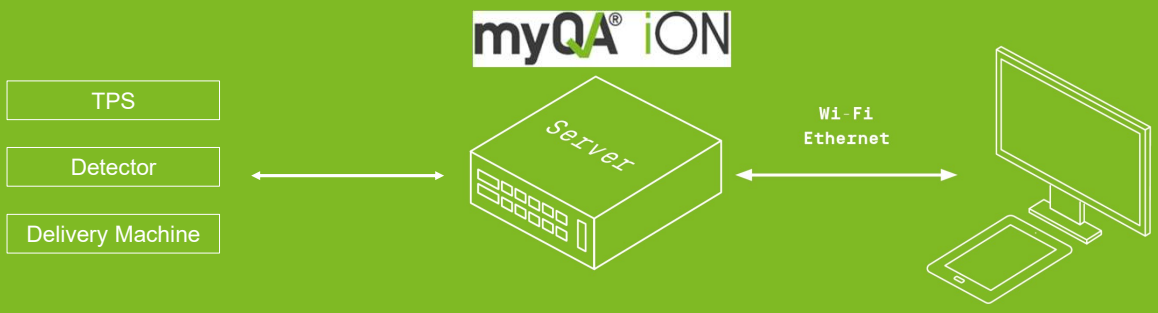
Network Access – Patient QA anytime and anywhere



- Web-client software
- Easy and fast integration into existing IT infrastructure
- Execute tests and review your results on any network device

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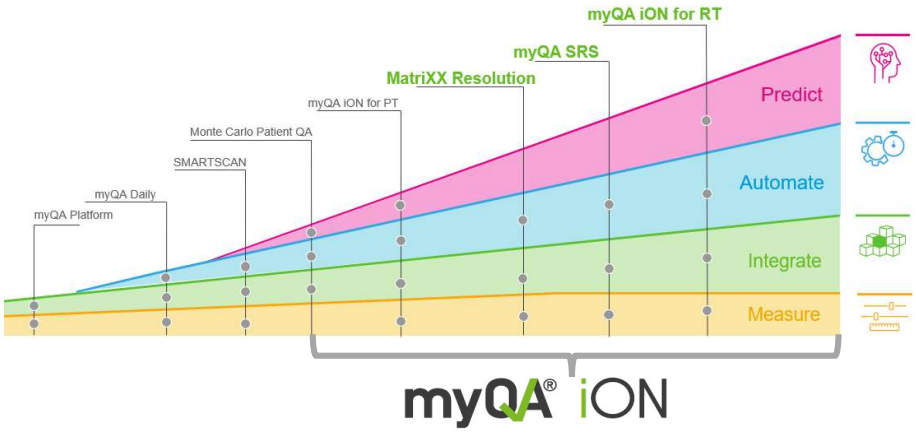
Introducing myQA iON



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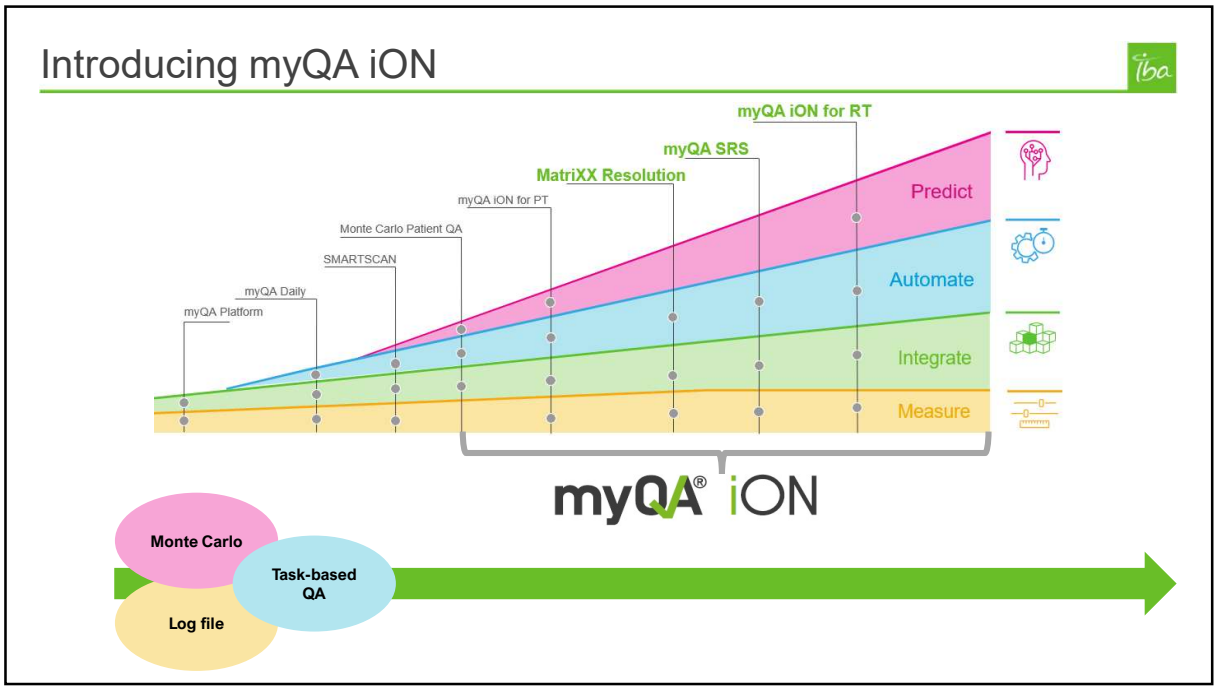
Introducing myQA iON
myQA iON for RT
myQA SRS
MatriXX Resolution
myQA iON for PT
Monte Carlo Patient QA
SMARTSCAN
myQA Daily
myQA Platform
Predict
Automate
Integrate
Measure
myQA® iON
Monte Carlo
Task-based QA
Log file

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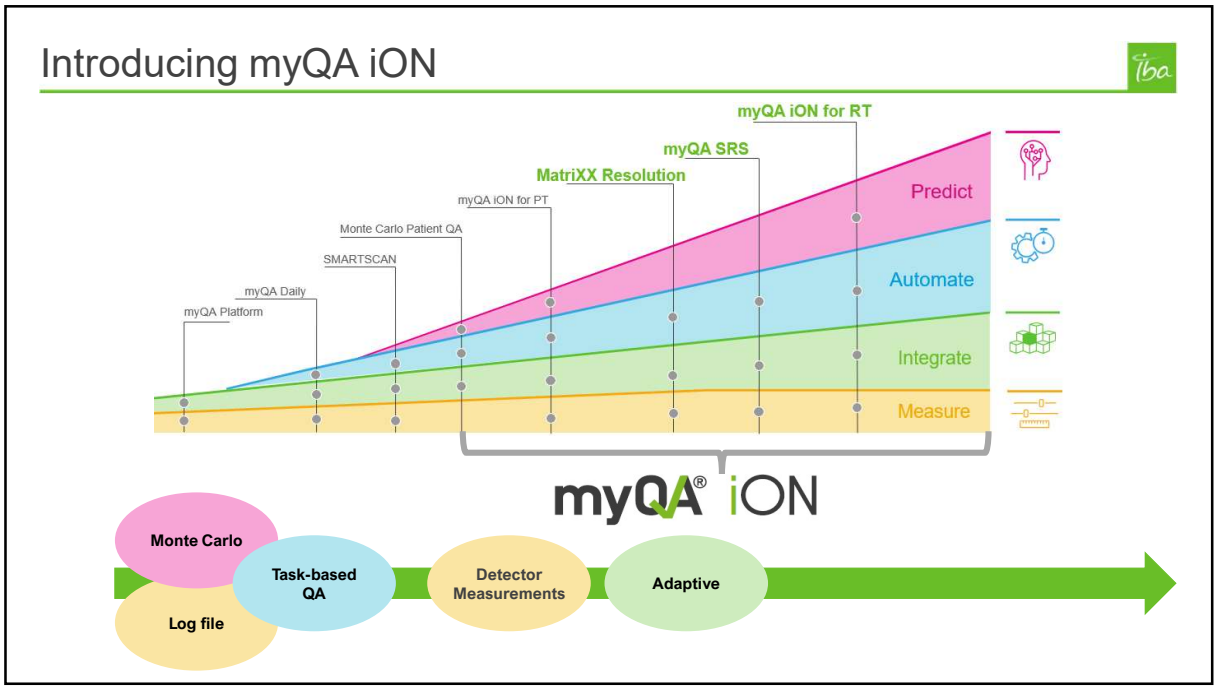
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Detector Measurements
Adaptive

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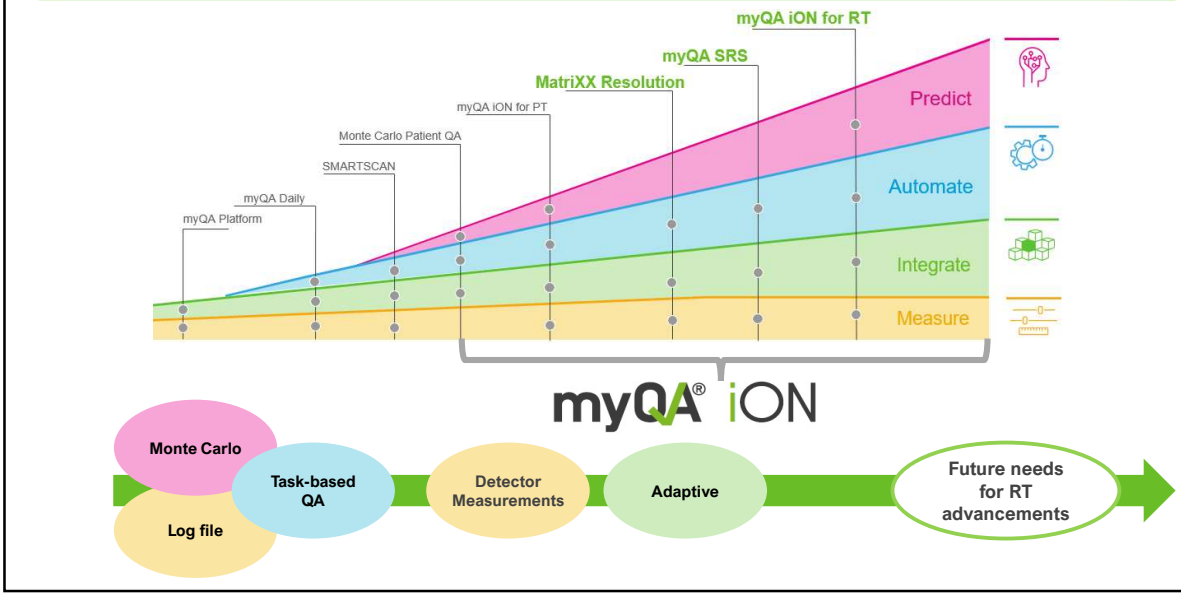

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myQA® SRS - digital SRS/SBRT Patient QA solution

- The Power of SRS revealed!

✓ 0.4 mm film-class resolution
✓ 12 x 14 cm^2
✓ 105,000 measurement points
✓ TG-218 compatible
✓ Zero pixel spacing

*"Patient-specific **SRS and SBRT QA results look great using the myQA SRS even for very tight parameters of 2mm/2%.** The digital detector QA workflow with **myQA SRS is 10^6 times faster and easier compared to using film**. The film-equivalent resolution for our QA measurements is the basis for **better and more meaningful SRS patient plan verification with a high sensitivity and specificity to detect real dosimetric issues**."*

Yun Yang PhD, DABR
Department of Radiation Oncology, Rhode Island Hospital, USA

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MatriXX Resolution

- Highest Resolution for IMRT & VMAT

- ✓ 6.5 mm resolution
- ✓ 1521 small-volume ionization chambers
- ✓ 25.3 x 25.3 cm^2
- ✓ Completely wireless
- ✓ TG-218 compatible
- ✓ Central line chambers

*… the detector has a **great spatial resolution** combined with the **excellent dosimetric response** of the IBA ionization chambers, which ensure precision and reproducibility at all dose, dose rate and x-ray energy conditions of clinical use…*
*… the system allows **quick and reliable pretreatment checks of IMRT and VMAT plans**, with fields from small to very large size….*

Luca Bindoni, Medical Physicist, Treviso Regional Hospital, Italy

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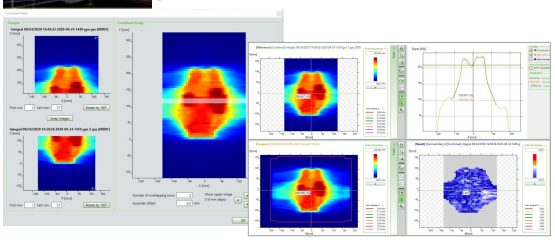
myQA® New Software features

Combine fields

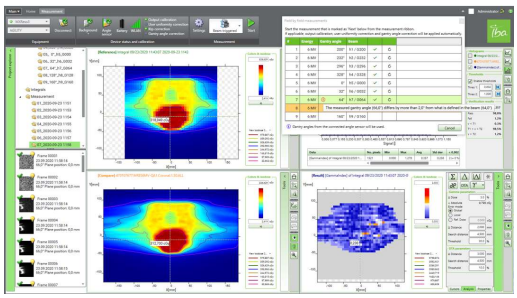
- Large fields QA
- Essential for Halcyon™ users
- Single combined measurement

> MatriXX Resolution detector length



Field by field

- For IMRT commissioning AAPM TG-218
- Automated measurement process for 0 and native gantry angles



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Thank you.

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For more information, please contact your
Patient QA Experts at IBA Dosimetry

iba-dosimetry.com