RapidArc Commissioning Services

Offered by RapidArc commissioning consultants, John Washington, M.S., R. Todd Clark, M.S., Anton Eagle, M.S., Darryl Kaurin, Ph.D., M.S.

If you have invested in RapidArc® radiotherapy technology from Varian Medical Systems or are thinking about it, then now is a good time to find out more about commissioning services that can help you get your system up and running smoothly. The commissioning protocol includes system calibration and verification in order to ensure proper clinical performance. Please refer to the detailed summary below for a complete listing of the performance tests that will be completed as part of the standard RapidArc commissioning protocol.

What's covered...

General Machine Performance

Gantry Angle Calibration

- The accuracy of the gantry angle readout will be verified.

Isocenter Calibration

- The radiation isocenter will be verified

Arc Dosimetry

- Consistency and stability of beam output for arc beams will be verified.

DMLC Dosimetry

- Consistency and stability of dose delivery in DMLC mode will be verified at different gantry angles.

RapidArc Performance Using EPID

Picket Fence Test vs. Gantry Angle

- DMLC performance will be verified and compared at different gantry angles.

Picket Fence Test during RapidArc Delivery

- DMLC performance will be verified in RapidArc mode.
- A test with known errors will be performed to demonstrate sensitivity of the Picket Fence Test in RapidArc mode.

Control of Variable Dose Rate and Gantry Speed during RapidArc Delivery

- Consistency of dose output with for different combinations of gantry rotation speed and dose rate will be verified.

Control of Variable Leaf Speed during RapidArc Delivery

- Consistency of dose output with different combinations of MLC speed and dose rate will be verified.

Quality Assurance

Patient-Specific QA

- Accuracy of dose calculation for RapidArc will be demonstrated for typical plans by comparison with measurements.
- Calculations will be performed with customer configuration.
- Measurements will be performed on customer machine.

Commissioning your system can take as little as two days with RapidArc commissioning consultants.

For more information about RapidArc commissioning services, please contact Northwest Medical Physics Center at contact@nmpc.org or (425) 672-2841.

RapidArc commissioning consultants available to assist you...

John Washington, M.S.

John Washington, M.S., joined Northwest Medical Physics Center (NMPC) in Lynnwood, WA in the early 1970s and has close to 40 years of clinical experience. During his tenure as a medical physicist at NMPC, he published numerous scientific papers and became ABR certified in therapeutic radiological physics. Washington has extensive experience with advanced techniques, including intensity-modulated radiation therapy (IMRT) and image-guided radiation therapy (IGRT). He received his M.S. degree from the University of Washington and is a member of the American Association of Physicists in Medicine.

R. Todd Clark, M.S.

R. Todd Clark, M.S., is a medical physicist at NMPC. His responsibilities include providing physics support for the St. Joseph Hospital Cancer Center (SJHCC) located in Bellingham, WA. In addition to implementing a comprehensive QA program for SJHCC, Clark provides ongoing therapeutic radiologic support, supervises and directs radiotherapy treatment planning, as well as provides brachytherapy and radiation safety support. He received his master of science degree in radiological physics from San Diego State University and is ABR certified.

Anton Eagle, M.S.

A medical physicist at NMPC, Anton Eagle, M.S., received his M.S. degree in medical physics from the University of Colorado and is ABR certified. Eagle has experience with IMRT QA, IMRT and conventional 3D treatment planning, linac calibration and acceptance testing, beam scanning and data acquisition, treatment planning system commissioning, as well as stereotactic radiosurgery (SRS) planning, treatment, QA, and testing.

Darryl Kaurin, Ph.D., M.S., DABR, CHP

Darryl Kaurin, Ph.D., M.S., is a medical physicist at NMPC. He has extensive experience with carrying out dosimetry treatment planning (2D, 3D, IMRT), stereotactic radiosurgery, LDR, HDR, accelerator QA, and accelerator commissioning. Prior to joining NMPC, Kaurin held the position of assistant professor and chief medical physicist in the Department of Radiation Oncology at the Oregon Health and Science University in Portland, OR. He has published numerous scientific papers and been a guest lecturer at various conferences. Kaurin received his M.S. in radiological health sciences from Colorado State University and his Ph.D. in radiation science from Rutgers University.

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Certified Commissioning Services Provider