

SmartArc is here

Philips Radiation Oncology Systems Pinnacle³ Version 9 with SmartArc

Pinnacle³ Version 9 with SmartArc* simplifies enterprise-wide image and information management, offering workflow enhancements for intensity-modulated radiation therapy (IMRT), as well as image-guided radiation therapy (IGRT) through enhanced handling of 4D image sets, image import, and expanded DICOM export.

The integrated SmartArc module, available with Pinnacle³ Version 9, provides the tools to create rotational IMRT plans using a conventional linear accelerator and a conventional multileaf collimator (MLC). SmartArc uses principles developed for both intensity-modulated arc therapy (IMAT)[†] and volumetric modulated arc therapy (VMAT)[‡].

Key advantages

SmartArc plans are delivered while the gantry rotates around the patient. The intensity of the radiation is modulated and the shape of the beam is dynamically adjusted by moving the MLC leaves. The gantry speed and dose rates may also be changed during the rotation. This provides you with the potential to create plans that are comparable to your standard IMRT plans but with a shorter treatment time.

PHILIPS

Pinnacle³ Version 9 with

Key SmartArc features

- Works with VMAT-capable Varian and Elekta accelerators
- Supports both constant and variable dose rate delivery
- Allows plans with single or multiple arcs
- Allows the creation of plans with arcs between 90 and 360 degrees
- User-select control point spacing of 2, 3, 4 or 6 degrees
- Allows the creation of plans with coplanar or non-coplanar arcs
- User-Adjustable dose objectives during optimization

Why choose SmartArc?

It's part of the Pinnacle³ treatment planning solution, in use by 79% of the top cancer centers in the United States. Top centers trust the reliability, flexibility and accuracy of Pinnacle³.



SmartArc is based on the Philips existing IMRT planning software, simplifying ease of use.

Is SmartArc designed to support all accelerators?

SmartArc is designed to work with VMAT-capable Varian and Elekta linear accelerators, including support for the Varian HD120 MLC, and the Elekta Beam Modulator.

What Record and Verify systems does SmartArc support?

SmartArc supports Varian ARIA and IMPAC MOSAIQ Record and Verify systems.

Can SmartArc plans be used for boosts?

SmartArc plans can be created as boost plans for standard IMRT, 3D, or SmartArc plans.

Is planning with SmartArc similar to DMPO?

The planning process for SmartArc is very similar to the basic process for DMPO.

- Add a dynamic arc beam
- Specify couch, collimator, and beam angles
- Specify objectives as you would for standard IMRT plans
- Specify the SmartArc optimization parameters
- Optimize
- Compute the final convolution dose

Which new parameters does SmartArc allow me to specify?

You can specify several new dynamic machine parameters including, but not limited to, maximum leaf and jaw speed (cm/s), maximum gantry speed (deg/s), and dose rate tables (MU/min).

What about QA?

SmartArc allows you to export a full 3D dose map, dose maps for all control points in the beam, and planar dose from the 3D dose map.

SmartArc FAQs

Do I need to remodel my machines?

There is no need for remodeling if your machine was commissioned in v7.4 or higher. Machines must be re-commissioned but not remodeled.

What are my training options?

WebEx training for your staff is included with every sale; advanced training is also available.

What is required to run SmartArc?

The accelerator must have hardware and software capable of VMAT delivery. Pinnacle³ Version 9 software requires a System 810 server, or other qualified Solaris 10 custom-configured server. The SmartArc module is a separate license available for purchase within Pinnacle³ Version 9. SmartArc workstations must be licensed for IMRT and DMPO.

What if I have a SB8000 Blade client?

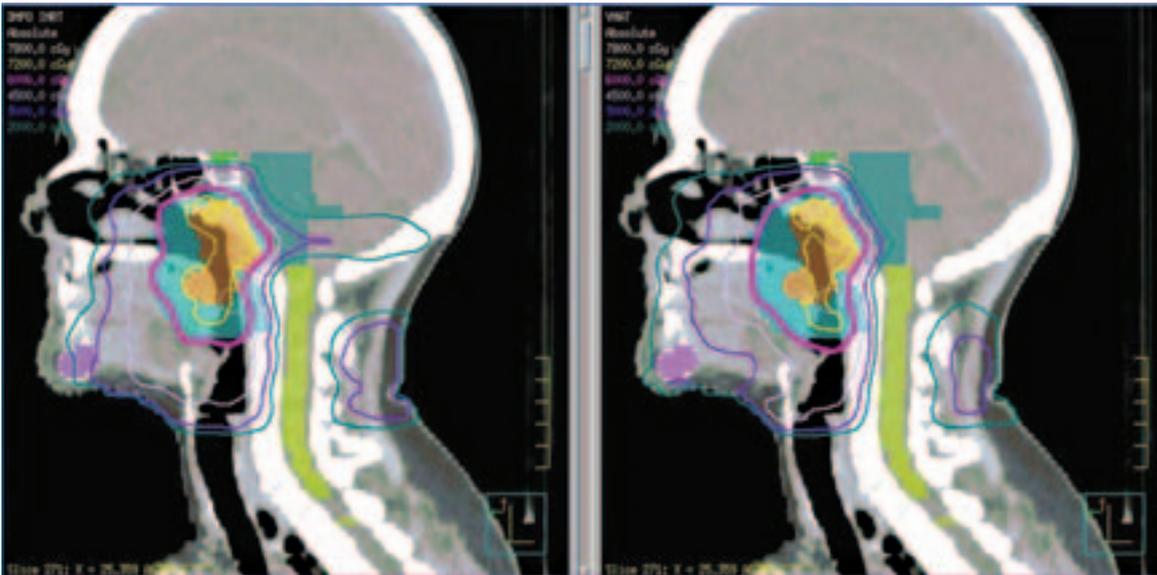
Blade clients in the SB8000 product may be licensed for SmartArc.

What if I have a Solaris 8 client?

Solaris 8 clients with V250 or newer may run Pinnacle³ Version 9, but will not be licensed for SmartArc.

What else do I need to know about hardware?

Philips recommends 16 GB of RAM for SmartArc workstations. RAM upgrades are available for System 810.



9 Beam DMPO

SmartArc

* Developed in partnership with RaySearch Laboratories AB, Stockholm, Sweden.

† Yu CX. *Intensity-modulated arc therapy with dynamic multileaf collimation: An alternative to tomotherapy.* Phys Med Biol. 1995; 40: 1435-1449.

‡ Otto K. *Volumetric modulated arc therapy: IMRT in a single gantry arc.* Med Phys 2008;35:310-317.

For more information, visit www.healthcare.philips.com/radiationoncology



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