

A detailed view of a Philips Azurion linear accelerator in a treatment room. The machine is white and features a large, curved gantry. A patient table with a light blue cushion is positioned in the center. A control console with a tablet is attached to the side of the machine. The room has a clean, clinical appearance with white walls and a recessed light fixture.

PHILIPS

Image guided therapy



Education

Philips Azurion

Off-site course

Medical physicists



Philips Azurion off-site course for medical physicists

The objective of this course is to equip you with the necessary capabilities to fulfill your regulatory responsibilities relating to the safe and effective use of Philips Azurion interventional X-ray systems.

You should already possess a general understanding of X-ray physics and technology, so this course focuses on aspects specifically related to the Azurion system and will provide opportunities for hands on experience of using Azurion.

Day 1

Introduction to Azurion

You will find out how to operate the Azurion system, with a focus on areas relevant to you as a medical physicist.

- Setting up a test session, including an explanation of the Azurion user interface and basic system operations
- Explaining the dose display both in the control room and the examination room with a brief recap of Dose Area Product (DAP) and Air Kerma (AK) at the interventional reference point
- Accessing the Azurion Instructions for Use

Automatic dose rate control

You will learn how the Azurion system controls X-ray acquisition-related parameters and how this translates into Air Kerma versus water thickness curves.

In a hands-on session, you will learn how dose rate control is influenced by the various selections available on the Azurion user interface.

Quality assurance measurements

To enhance the efficiency of your medical physics quality assurance activities, you will learn about constancy measurements performed during system installation, and about planned maintenance.

The structure behind the measurement framework is explained, including measurements intended to detect issues within the various system building blocks.

In a hands-on session, you will learn how constancy measurements are performed on Azurion.

User quality control mode (UQCM)

As a medical physicist, you can access the optional user quality control mode (UQCM), incorporating tools to support you in performing quality assurance and quality control activities.

You will learn about accessing manufacturer quality control measurements and exporting the X-ray protocol database to monitor constancy after system updates.

In a hands-on session, you will learn about the Azurion UQCM features.

Questions and answers with Philips staff

You will have the opportunity to submit questions to Philips research and development team members.

Day 2

Modern image processing

In this session, you will find out more about the technology used in Azurion image processing and the impact of performing tests using phantoms.

You will learn about Azurion's adaptive properties based on clinical image content and how this has been validated using clinical evaluations.

3D rotational X-ray/conebeam CT (CBCT)

In this session, you will receive a basic overview of how 3D rotational X-ray (CBCT) has been implemented on Azurion, followed by a practical demonstration on the system.

You will find out about the calibration steps needed for optimal performance and how to implement CBCT dosimetry to enable comparison with regular CT scanning.

Radiation dose index tracking

Various methods of exporting radiation dose index information from an Azurion system will be presented.

The information available in the Radiation Dose Structured Report (RDSR) DICOM object will be visualized using a dose management system implementation.

You will learn more about the Philips DoseAware system for providing real-time staff dosimetry followed by information about how to review staff dose data for further analysis.

Actionable radiation protection

In this session you will gain hands-on experience with actionable radiation protection on the Azurion system.

By tracking DAP and AK on the Azurion display and staff dose on the DoseAware display, you will learn about the impact of actions that can be taken to provide a radiation-optimized way of working.

You will also learn how to assess and benchmark the optimized way of working of interventional staff members.

Knowledge test

To enable accreditation and maintenance of certification points, the course concludes with a test of your knowledge.

For more information, please contact your Philips representative.

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