

Linear Accelerators and Treatment Planning Systems (TPS) Commissioning & Acceptance

Commissioning & Acceptance in Radiotherapy is the combined process of equipment testing, system configuration and verification checks, needed in order to get any equipment ready for clinical use.

Nowadays there are two major types of devices subject to commissioning and acceptance in any common Radiation Oncology installation:

Treatment Planning Systems (TPS) commissioning comprises all the tasks of measuring your beam data, importing it to the system and validating the final configuration.

Linear Accelerators (Linacs) commissioning includes equipment acceptance and complete QA coverage to insure full conformance of these medical devices.

To give our customers more flexibility Mercurirus Health (MH) provides both solutions independently or in a combined pack.

TPS commissioning - What does it include?

- ✓ Beam data acquisition for selected energies.
- ✓ Linac non-dosimetric configuration.
- ✓ Beam data import and configuration.
- ✓ Validation of TPS calculations in a wide range of setups.

Linac commissioning - What does it include?

- ✓ Equipment acceptance.
- ✓ Quality Assurance according to reference protocols (TG142, etc...).
- ✓ Dose Calibration.
- ✓ Reference QA for special techniques implementation (IMRT, Radiosurgery, VMAT or RapidArc).

External Commissioning – benefits

- ✓ Experienced Team with more than 40 TPS and 20 Linacs commissioned, ensures execution with the utmost rigor and high quality standards.
- ✓ Time savings arising from experience and process optimization.
- ✓ Experience with measurement equipment from all common manufacturers.
- ✓ Experience in TPS and Linacs manufacturers from all common manufacturers.
- ✓ For previously existing installations (with other Linacs still at work), no need for staff allocation and consequent interruption or reduction in regular activity.

Our Schedule*

Day after installation	Completed Task
2	Acceptance
12	Data acquisition
16	Linac QA
18	Beam modeling
20	Calculations validation
21	Report delivery & Linac available for treatment

*This schedule is representative of a standard situation of 2 photon and 5 electron Energies

Frequently Asked Questions

What is Mercurius Health's response time compromise?

For a standard installation with one TPS and one Linac commissioned, Mercurius Health ensures the full task execution within 21 days.

What information does Mercurius Health need prior to the execution of the job?

Mercurius Health needs to know what measurement equipment, Linac and TPS does the client has besides the vendor and models identification. Linac description, including energies and add-on information is also required.

What is included in your commissioning service?

Commissioning service includes Linac commissioning after installation and TPS commissioning.

Can you commission more than one TPS at the same time?

Yes. There is no limitation to the number of TPSs to be commissioned simultaneously.

Can you commission more than one Linac at the same time?

Yes, depending on the availability of the measurement equipment.

What type of data do you collect?

Mercurius Health acquires all mandatory data from your TPS and also an extended set of relative and absolute dose measurements for algorithm validation and future Quality Assurance reference.

What material is handled to me?

At the end of service a CD is given to the customer, including a general report describing the entire process and the final results, and also containing a collection of all measured data.

Does Mercurius Health have experience with my specific Linac or TPS model?

Mercurius Health team is proficient in all of the following major equipment vendors:

Varian, Elekta and Siemens.

PTW, SunNuclear and IBA.

Varian Eclipse, Elekta XiO and Monaco, BrainLab iPlan and BrainScan, Oncentra MasterPlan.

How far in advance do I need to schedule your service?

You should contact Mercurius Health at least with 2 weeks in advance so that our team will be on site at the exact scheduled date.

How can I contact you?

By email: info@mercuriushealth.com

or by phone: (+351) 217 957 641

Mercurius Health is a Portuguese company focused in technical cooperation, consultancy, on-site operation and training in actual or prospective centers seeking for **edge solutions** in **Radiotherapy, Nuclear Medicine & PET** or **Cyclotron** based Radiopharmaceutical production.

With strong expertise proven for more than a decade, Mercurius Health integrates **multidisciplinary teams** of Medical Physicists, Dosimetrists, Radiation Protection Officers, Technologists, Physicians and experts in Radiochemistry/Radiopharmacy, able to fully operate a Center, to fulfill a specific need and/or to train local teams on-the-job.