

# APOLLO lasers

Making patient alignment in bore-type LINACs faster and more ergonomic



More than just comfortable

# Improving work ergonomics and increasing patient safety at the same time

Many daily tasks performed by the RTT (MTRA) include physical work. Due to the spatial conditions and the dedicated functions of the devices, losses in terms of ergonomic working must often be accepted. Any easing

and improvements here lead not only to more comfort but better health.

→ *External lasers support an accurate and precise workflow and result in optimal treatment.*

## Higher accuracy

During positioning, external lasers make it much easier to go for the final millimeters. The more accurately the patient is positioned, the more precise the treatment.

## Faster positioning

Position your patient fast and easy with perfectly adjusted lasers that project the coordinates of the LINAC isocenter.

## Less repositioning

Perfectly visible laser lines outside the bore help to avoid repositioning after CBCT. Your time target can be reached more easily and more patients can be treated. The lasers pay for themselves after a short time.

## Greater safety

Double position checks from external and internal lasers provide greater safety. If internal lasers are not available, external lasers provide an optimally visible starting point for the treatment.

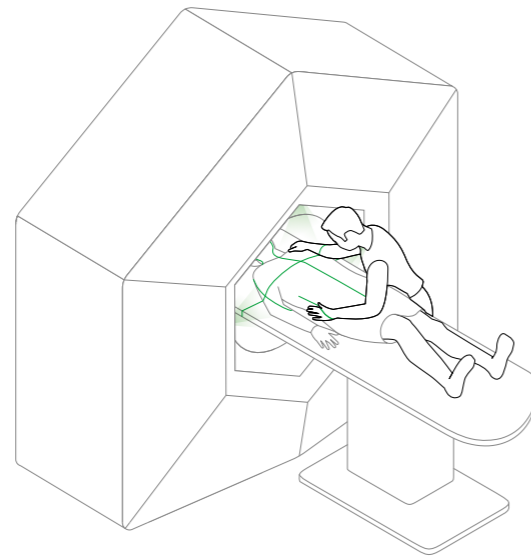
# Why external lasers?

Lasers outside the bore-type LINAC make it easier for you to have access to the patient. No more contorted movements as a result of leaning into the bore. In addition there is more space outside which gives room to

rotate the person if necessary. External lasers enable patient alignment, even for tall and heavy persons. And this is achieved in an ergonomical operating mode that is beneficial for your health and safety.

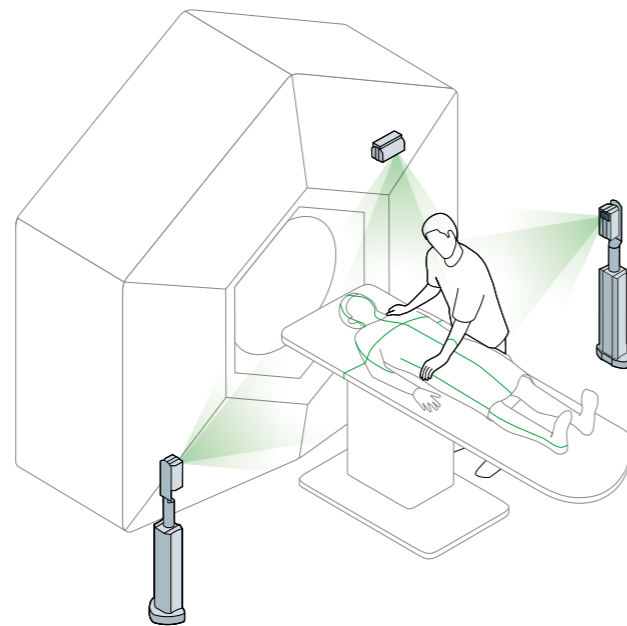
## Patient alignment with internal lasers only:

Lateral rotation is necessary when positioning in the bore. At the same time, the conditions are very unfavorable during lifting, as the leverage effects are greater.



## Patient alignment with external lasers:

Working in an upright position relieves the spine and prevents it from twisting. In addition, the patient is easily accessible.



“The LAP lasers are robust, and the external coordinate system provides an independent layer of safety for patient alignment and QA tasks.”

**Dr. Stéphane Muraro**

Chief Medical Physicist  
Centre de Cancérologie du Grand Montpellier, France



# Good for the patient

The time before the treatment begins and the therapists prepare the patient is valuable for comforting the patient mentally and physically. Using external lasers in this step means the patient does not have to be in the bore before radiation starts. The

interaction with the clinical staff and the possibility to communicate with eye contact leads to a more relaxed patient. This makes it even easier for the patient to remain in a specific position during treatment and thus leads to a better treatment result.

“With an external laser system installed at the Halcyon, we achieve better patient interaction. It is easier to align the patient outside the bore, the communication remains more personal, and patients feel more relaxed.”

**Dr. Stéphane Muraro**

Chief Medical Physicist  
Centre de Cancérologie du Grand Montpellier, France



# Making QA easier and enhancing efficiency

Lasers are a useful tool not only to position patients but also phantoms. Regular QA is mandatory and recommended by various associations and groups and is also stipulated by guidelines (e.g. AAPM TG-142, DIN 6847-5). In some countries, it is mandatory to display the isocenter using an external light source. QA tasks

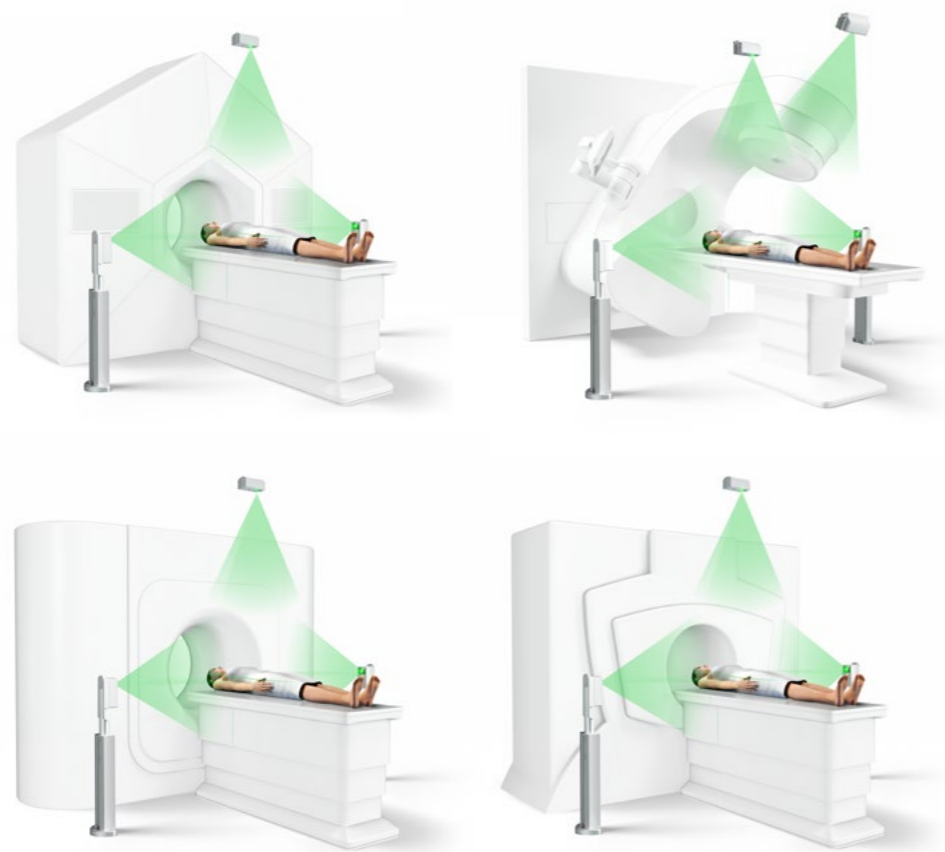
are usually performed in the evening hours after patient treatments. Two factors are decisive: precision and efficiency. Both are enhanced with the use of external lasers. They are a supporting tool integrated inconspicuously into the workflow, and are reliable and extremely long lasting without compromise over many

years. Accurate positioning helps the clinical team to stay on schedule. Less repositioning is needed, and more patients can be treated. All factors contribute to the lasers paying for themselves financially after a short time.

Supported LINACs

# From conventional to bore-type LINACs

Regardless of which LINAC is used, bore-type or C-Arm, clinical staff and patients benefit from precise and easy positioning with external lasers. APOLLO MR3T was designed for use on MR devices. It meets all criteria for use in an MR environment. Contact us for more information and an individual consultation.



## About us

LAP is one of the world's leading suppliers of systems that increase quality and efficiency through laser projection, laser measurement, and other processes. Every year, LAP supplies 15,000 units to customers in industries as diverse as radiation therapy, steel production, and composite processing. LAP employs 300 people at locations in Europe, America and Asia.



**90+**  
Partners



**300**  
Employees



**8**  
Locations



### Quality

We work to uniform standards and with certified processes. For us, "Made in Germany" means the highest precision in manufacture and quality inspection of each individual device. For our customers, this means planning and process certainty.

All locations around the world use a quality management system to EN ISO 13485 or EN ISO 9001. Our products have all the necessary approvals and registrations almost everywhere in the world.



### Service

We ensure maximum availability of your equipment so you can concentrate on your core process. Wherever you need us, our certified service technicians are quickly on site in any time zone. We support you from installation and commissioning, through user training, up to maintenance, repair or unit replacement.

Our efficient logistics ensure fast availability of spare parts worldwide. For technical questions and support, our helpdesk is at your disposal by telephone, via e-mail or remote diagnosis.



**made  
in  
Germany**

Contact us!  
[info@lap-laser.com](mailto:info@lap-laser.com)

## Contact us!

P +49 4131 95 11-95

E [info@lap-laser.com](mailto:info@lap-laser.com)

**in** LAP Laser

**▶** [laplaser](#)

### **LAP GmbH Laser Applikationen**

**Zeppelinstr. 23**

**21337 Lüneburg**

**Germany**

LAP GmbH Laser Applikationen, Germany / LAP Measurement Technology GmbH, Germany / LAP Sued GmbH, Germany / LAP FRANCE SAS, France / LAP GmbH Laser Applikationen c/o representative office DMAN, Russian Federation / LAP Laser Applications Asia Pacific Pte. Ltd., Singapore / LAP Laser Applications China Co. Ltd., China / LAP of America Laser Applications, L.L.C., USA / LifeLine Software, Inc., USA  
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