PHILIPS

Radiation therapy planning

Customer story

Lake Constance Radiation Oncology Center

Who?
Mr. Holger Wirtz,
Chief Medical Physicist
Prof. Johannes Lutterbach,
Radiation Oncologist

Where?
Singen, Germany
- Treated 1,500 patients in 2014
- Almost equal split between palliative and curative diseases

Challenge?
Maintain efficiency while creating outstanding treatment plans on the first pass

Solution?
Pinnacle³ radiation therapy planning system and Brilliance CT Big Bore scanner

Planning for excellent care

No patient leaves the Lake Constance Radiation Oncology Center without a treatment plan. That's an exceptionally high level of care – one that places equally high demands on workflows. Caseloads increase between 5 and 8 percent a year, and between 60 and 70 percent of all cases use VMAT.

For fast plans they trust, Mr. Wirtz and Prof. Lutterbach use Pinnacle³ radiation therapy planning. The system's advanced tools and applications simplify tasks while generating high-quality results. With enhanced automation, workflows are now so efficient that clinicians can consult one additional patient per day.

Efficiency...

> **The integration on Pinnacle³ is like nothing I've seen on the market. It pulls together workflows into one system."**
>
> **Mr. Holger Wirtz**, Chief Medical Physicist

Working quickly

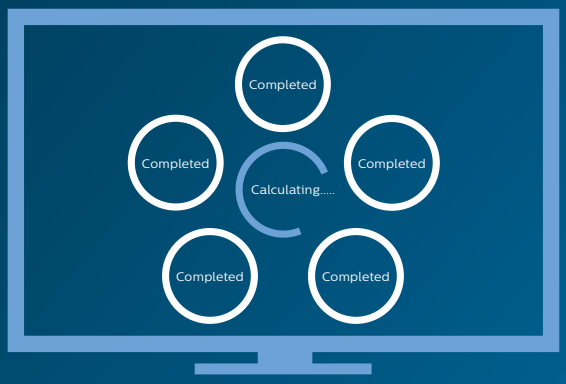
Pinnacle³'s powerful computation accelerates processes throughout the center. IMRT plans are typically optimized in two minutes; complicated plans require about an hour. At the LINAC, therapists spend only 90 seconds (down from 15 to 20 minutes) with the phantom data for cross-measurement, allowing them to start planning the next case.*

Automation tools on Pinnacle³ also change the way the center schedules work. Auto-segmentation with SPICE, for example, helps prevent labeling mismatches that can slow down scripts. The result? "I can start working on a case on Monday morning instead of Tuesday afternoon," says Mr. Wirtz.

Working virtually anywhere

Clinicians access and review plans from any site in the network, including remote locations such as a home office. Plans are managed on the central SmartEnterprise server and automatically routed to the next caregiver responsible for them. "I log on and review and approve my plans in minutes," explains Mr. Wirtz, "and I don't have to be in Singen. This is extremely helpful in emergencies. We can run a very complicated plan and start treatment in one hour, even with VMAT."

From single-tasking to multi-tasking



While Pinnacle³ calculates one plan in the background, Mr. Wirtz cross-checks five cases from another site.

Saving time when contouring important structures

30 minutes

Performed manually by experienced users

10–15 minutes

Performed automatically by Pinnacle³

Contouring procedures for head-and-neck cases*

> **We're able to deliver high-quality care with the first treatment – not after two or three tries with time in between."**
>
> **Prof. Johannes Lutterbach**, Radiation Oncologist

...that puts **care** first

Supporting care through technology
Quality of care, or quantity of patients? Prof. Lutterbach doesn't see a trade-off. "Our medical technology allows us to scan a lot of patients quickly, and start the treatment fast," he says. Pinnacle³ radiation therapy planning and a Philips Brilliance CT Big Bore scanner were deployed when the center was founded in 2008.

Maintaining consistency
Plans created with Pinnacle³ enjoy a good reputation. "[Pinnacle³] makes it easy for our colleagues in surgery to understand what we do," he points out. Only about ten percent of cases require replanning; the rest rely on one plan in which integrated boosts and the final dose are already considered.

Starting with the image
Mr. Wirtz appreciates the workflow enhancements brought by a dedicated CT system. What about the role of image quality – especially when over a third of the center's patients have large orthopedic implants? "Normally, extracting [the artifacts these implants cause] would take 20 or 30 minutes," he says. "But the O-MAR algorithm is very powerful. It's done in two to five minutes."

Auto-Planning on Pinnacle³: enhancing treatment plan quality

The center also uses Auto-Planning, a new module recently released for Pinnacle³ 9.10. Designed to help clinicians accelerate IMRT and VMAT planning with smart automation tools, it also features a progressive optimization algorithm.

For Mr. Wirtz, the algorithm plays a valuable role in individual care. "The level of personalization is deep," he says. "Other systems 'start and stop.' Here, I can develop the plan further" – even after clinical goals are met.

> **We know we create a very good plan for each patient. Auto-Planning helps us get even better."**

“We’ve always had Pinnacle³. The surgeon here often says he can’t tell our patient has undergone radiation – even when there’s a pause between treatment and surgery.”

Prof. Johannes Lutterbach, Radiation Oncologist at Lake Constance Radiation Oncology Center, Singen, Germany

When it comes to therapy planning, are you spending time on the right things?

Discover how the Pinnacle³ radiation therapy planning system from Philips can help you deliver exceptional care, faster, and at lower cost. Contact your local representative or visit us at **philips.com/pinnacle**

* Results are specific to Lake Constance Radiation Oncology Center and may not reflect the results achievable in other institutions.

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