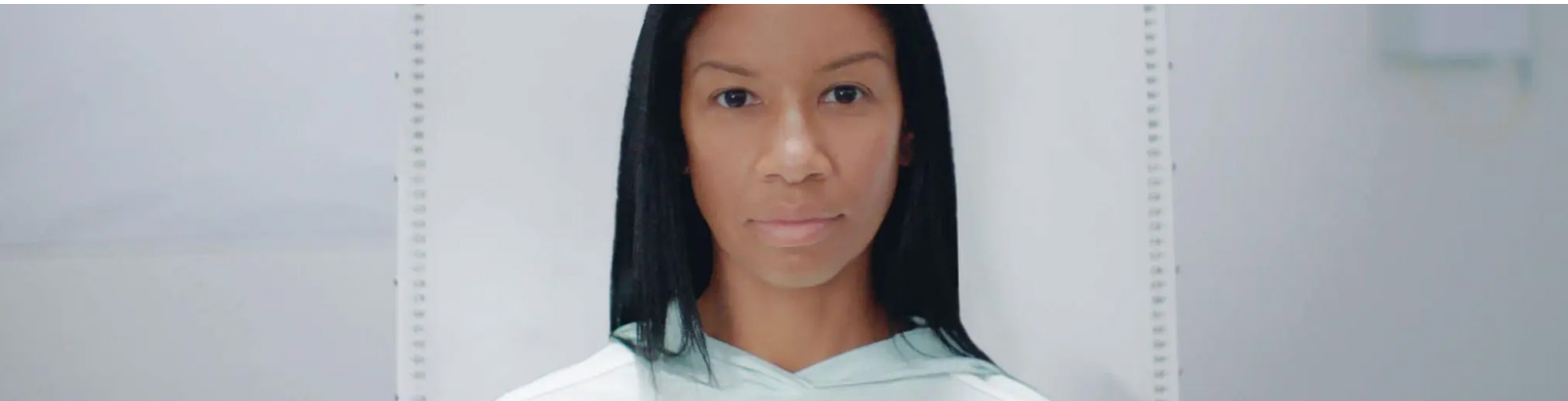


Upright Radiation Therapy



Client

Leo Cancer Care

Practice Areas

Advanced Imaging
Robotic & Radiotherapy

Core Disciplines

Mechanical Engineering
Industrial Design
Quality System Management
Applied Physics

Challenge

Leo Cancer Care needed to develop a radiation therapy system capable of imaging and treating patients in an upright seated position – requiring a fundamental rethink of traditional radiotherapy architecture. Replacing large rotating gantries with a fixed-beam, slow patient-rotation strategy introduced complex mechanical, imaging, and system integration challenges, all while meeting the precision and safety standards required for clinical use.

Solution

Triple Ring applied expertise in radiotherapy physics, imaging systems, and mechanical engineering to design a gantry architecture supporting both upright and traditional patient positioning. Advanced modeling and simulation were used to streamline validation, while close collaboration ensured seamless integration of imaging and positioning subsystems into a unified clinical platform. Mechanical design was aligned with ISO 13485 medical device standards throughout.

Client Impact

- Delivered an innovative gantry design supporting upright radiation therapy workflows
- Enabled a viable clinical alternative to traditional rotating-gantry radiotherapy systems
- Improved patient comfort and positioning accuracy through a natural, seated treatment configuration
- Advanced Leo Cancer Care's platform toward clinical deployment as a next-generation radiotherapy solution

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