Mevion Medical Systems

- Radiation therapy company, dedicated to advancing the treatment of cancer
- US based company – 150 employees, established in 2004
- Primary commercial offices: USA (Boele), Asia (Tokyo), Europe (UK)
- Management leadership from the RT and PT Industry
  - Elastat, Varian, IBA, MGH/NFTC

- Manufacturer of the MEVION S250 Proton Therapy System
  - Single room proton therapy system
  - Designed to be implemented and operated like a conventional linac
    - One room at a time – or all at once...
    - Standardization: The MEVION S250 is an Image Guided Platform with beam shaping options
  - More than 20 contractual booked orders
    - 1 installation completed, 2 under installation and delivered and 3 under construction

- MEVION S250 Regulatory status:
  - Cleared in the USA by the FDA for clinical use (June 2012)
  - Received CE Marking (March 2012)

Mevion Proton Therapy in the USA
Recognizing the Challenges of Proton Therapy

- Big
- Impossible to integrate within an existing center
- Costly
- $150-200M project cost
- Complex
- Large gantry, single acceleration, beam line, magnets, power supply, etc.
- High operating costs
- Electrical and staffing
- Non-Standard Workflow and low throughput
- Beam sparring / rotating with complex patient setup
- Facility downtime
- Daily maintenance and with single point of failure

Conventional Proton Therapy is a High Risk
Financial Proposition for Any Institution

Just as electron linear accelerators began large
and were optimized,
proton accelerators can be made smaller.

1956

2013

Mevion - Superconducting Magnet
TriNiobium Core

Nb3Sn

TriNiobium Tin
Can carry as much as 3,000 Amps
The World's First Superconducting Synchrocyclotron

- TriNiobium Core proton source
- High field strength accelerator
- Beam characteristics optimized for RT
  - 250 MeV protons
  - Conventional dose rate: 4+ Gy/min
  - Low power requirements
  - High stability and reliability
  - Ion source not replaced in more than 2 years
  - All accelerators commissioned in factory

MEVION S250 Proton Therapy

MEVION S250 Proton Therapy
Verity Patient Positioning System™

- Image Based Clinical Workflow
- Multi-dimensional image guidance
- Integrated with Oncology Information System

- Efficient and precise positioning
  - Robotic couch with 6D adjustment
  - Auto-match with advanced validation

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Treatment Control Interface

- Simple and safe operator environment
- Oncology Information System integration
- ARIA™, MOSAiQ™
- Treatment planning integration
  - Eclipse, XiO, Pinnacle, Raysearch

Flexible Architectural Requirements
MEVION S250 Proton Therapy

- Lower capital cost
- Lower operational cost with staffing and utility similar to conventional RT
- Increase patient throughput:
  - Workflow similar to RT with full ALLIANSAIQ integration
  - Only quarterly maintenance required generally performed of hours
  - Dedicated proton source for each room - just like a linac - no beam waiting & no beam management
- Increase Return On Investment (ROI) with greatly reduced risks
- Support advanced treatment capabilities:
  - High precision gantry system: double sided and concentric
  - Radiographic and CT based patient positioning (also integration with 3rd party systems)
  - New generation beam shaping systems: Volumetric delivery and pencil beam scanning
- Deliver Scalability - Ability to start with 1 single room and increase capacity as needed
- Deliver Reliability - Each treatment room is independent