

“Radio-Compatible Active Motion Compensation Platform for Head and Neck Radiotherapy” VCU #15-079

Applications

- Head and neck (or brain) radiotherapy
- Positioning system that compensates real-time motion with a mechanical table
- High accuracy motion tracking procedures such as physical therapy and robotic guidance

Advantages

- More effective radiation treatment via patient motion compensation
- Add-on system on the existing treatment table
- Compatible with popular motion monitoring systems
- Repositions a patient's head independently from rest of body

Inventors

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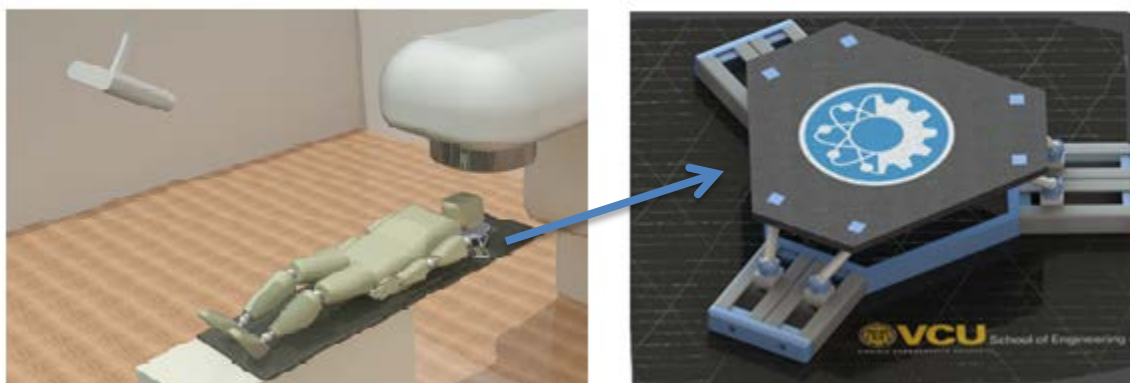
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Technology Summary

This novel invention is a device to compensate for patient motion through a mechanical 6-dimension platform. The system consists of a radio-compatible platform. The mechanical table receives input from popular motion tracking systems and compensates for movement by redirecting the head independently from the rest of the body (no commercial system exists for such functionality). This system allows for precise radiation treatment that maintains focus on a specific area for the head and neck (or brain). Below is a diagram of the system in a typical clinic.

Active Patient Positioning System (head and neck)



Technology Status

Patent issued: U.S. rights are available. 8,491,507.

This technology is available for licensing to industry for further development and commercialization.