Washington University in St. Louis
Office of Technology Management

COMFORTABLE RADIOTHERAPY COUCH TO IMPROVE PRECISION AND ACCURACY

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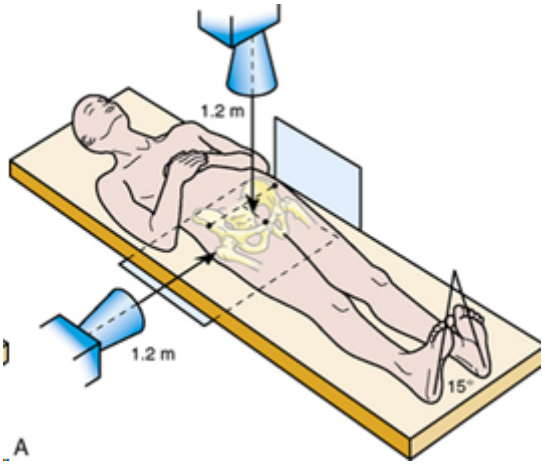
Background: High precision and accuracy is critically needed for the use of radiation treatment and diagnostic imaging (magnetic resonance imaging, computerized tomography, X-ray, positron emission tomography); each of these modalities uses the standard flat couch to manipulate the patient during procedure. However, the standard couch does not enhance precision and accuracy during diagnostic imaging/radiotherapy or improve patient comfort by any means. Therefore, there is a lot of area for improvement with regards to creating a couch that enhances patient experience and radiation treatment/diagnostic imaging outcomes.



Technology Description: Scientists at Washington University have developed a curved couch for the use in radiotherapy and diagnostic imaging. With its curvature, the patient is able to remain immobilized and comfortable on the couch for short and long periods of time; this will allow the procedure to become reproducible and streamlined. The curved couch will be able to reduce imaging artifacts and improve field of view, perception, and image quality during imaging. Image recognition will be much easier as well since there will be less deformation of the image while analyzing. With regards to radiotherapy, the area of patient organs treatable and radiation delivery efficiency is greatly enhanced due to the ability of the curved couch to include the entire patient within the treatable field of view. Additionally, streamlined clinical workflow will allow for better decision making and reduce waiting time for the patient following these procedures.

Key Advantages:

- **Achieves better precision and accuracy** of procedures used
- **Designed to improve patient positioning and immobilization -** a curved, comfortable couch would help the patient remain immobile, which is critical for safe and efficient radiotherapy
- **Compatible** with existing patient positioning blocks.

RelatedLinks

- Zhao Profile