

## Recent Advances in Imaging for Treatment Verification

SAMS session  
AAPM 2019 Annual Meeting

Laura Cerviño, Jing Wang, Olga Green, John Lewis

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## Comparing Treatment Verification Imaging Modalities

John H Lewis  
Progress update for Varian at AAPM 2019  
7/14/2019

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## Disclosures

Lewis: research grants from Varian Medical Systems inc.

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## Treatment verification imaging modalities

- 2D x-ray imaging
- In-room CT
- MVCT
- Ultrasound
- CBCT
- MRI
- Surface imaging



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## What modality should you use/buy?

- Selection of an appropriate treatment verification imaging modality depends on numerous factors.
  - Anatomical site
  - Treatment goals
  - Patient characteristics
  - Resource availability
- AAPM summer school 2018: "Image Guidance in Radiation Therapy: Techniques, Accuracy, and Limitations"
  - All presentations available in AAPM's virtual library

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## Learning objectives

- 1) Provide an up-to-date summary of recent advancements in the use of MRI, CBCT, and surface imaging for treatment verification.
- 2) Describe the advantages and limitations of each imaging modality in the context of their clinical use for different anatomical sites.
- 3) Summarize major areas of development in treatment verification imaging for each modality

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## Speakers



**Laura Cerviño**  
*Memorial Sloan Kettering*  
Surface imaging

**Jing Wang**  
*UT Southwestern*  
CBCT



**Olga Green**  
*Wash U*  
MRI

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