



# Simple Bolus Module Brochure

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*Improve treatment accuracy, and patient care using Adaptiiv's patient-specific bolus.*

Adaptiiv software enables the design of radiotherapy accessories that can be verified directly in the treatment planning system (TPS) before fabrication. Compatibility with the TPS increases the efficiency of the treatment planning clinical workflow and reduces the time required for accessory verification.



“If attempting to design and fabricate 3D printed accessories without using Adaptiiv’s solution, validation consists of visual inspection, calliper measurements, and CBCT scan on the patient. **Using Adaptiiv’s solution allows for an efficient way to verify the treatment plan within the TPS.**”

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# Simple Bolus

Bolus should never be one size fits all. Adaptiiv software uses patient DICOM data incorporated from TPS to design a digital bolus model that can be 3D printed.



## Clinical Benefits



### Access to Personalized Care

Patient-specific fit reduces air gaps and surface dose uncertainty compared to traditional sheet bolus.



### Clinical Precision

RT accessories designed in Adaptiiv software can be verified in the TPS, ensuring that the accessory matches the prescribed treatment plan before printing.



### Operational Efficiency

Adaptiiv software eliminates the need for multiple third-party solutions that require excessive design time and are not regulatory cleared.



The image above shows that 3D printed bolus provided an improved fit for all three gel phantoms. Volumes of air cavities were reduced with the use of 3D printed bolus by factors ranging from 1.4 to 16.3 compared to sheet bolus.<sup>1</sup>

The accuracy of fit of the bolus to the chest wall was improved significantly relative to the standard sheet bolus, with the frequency of air gaps 5 mm or greater reduced from 30% to 13% ( $P < .001$ ) and the maximum air gap dimension diminished from  $0.5 \pm 0.3$  to  $0.3 \pm 0.3$  mm on average.<sup>2</sup>

<sup>1,2</sup> Robar, et al (2017). *Inpatient study comparing 3D printed bolus versus standard vinyl gel sheet bolus for post-mastectomy chest wall radiation therapy*. *Practical Radiation Oncology*, 8(4), 221–229.  
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