

## Panther RealART®

Real-Time Treatment Planning for Utmost Precision



*"The online re-planning enabled by Panther RealART® would allow image-plan-treatment, the future standard practice of radiation therapy."*

**X. Allen Li, PhD, DABMP, FAAPM**  
**Chief of Physics and Professor**  
**Medical College of Wisconsin**

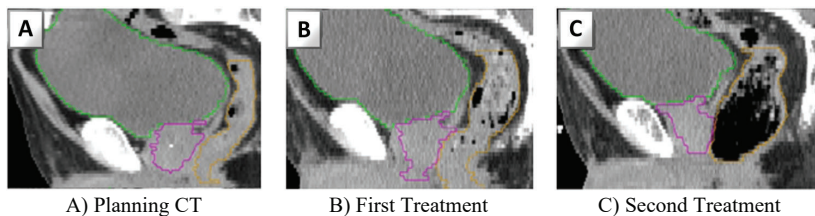


*"I am very pleased and excited to contribute the RealART® solution to the field of Radiation Oncology. I strongly believe this new solution will improve the ability to cure cancer and help avoid unnecessary patient suffering."*

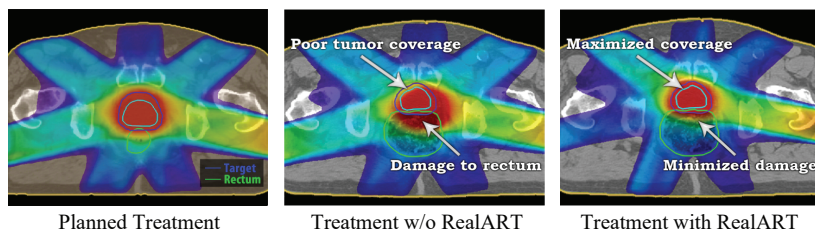
**John Nguyen**  
**Chief Executive Officer**  
**Prowess Inc.**

### Limitations of current treatment techniques

Changes in patient anatomy and differences in shape and location of tumor during the course of treatment present a great challenge to clinicians in developing an optimal treatment plan for radiation therapy. Traditionally, they have relied on diagnostic CT images for treatment planning, but this approach can sometimes be dangerous. It does not provide the means to adjust the plan to account for ongoing bodily changes; making it necessary to radiate a larger area to ensure tumor coverage, but at the expense of damaging healthy tissue.



In the case above, a significant deformation of the rectum occurred during the course of treatment that changed the tumor form and position. Using current treatment techniques, a larger area is radiated in order to ensure tumor coverage, often overdosing healthy tissue.



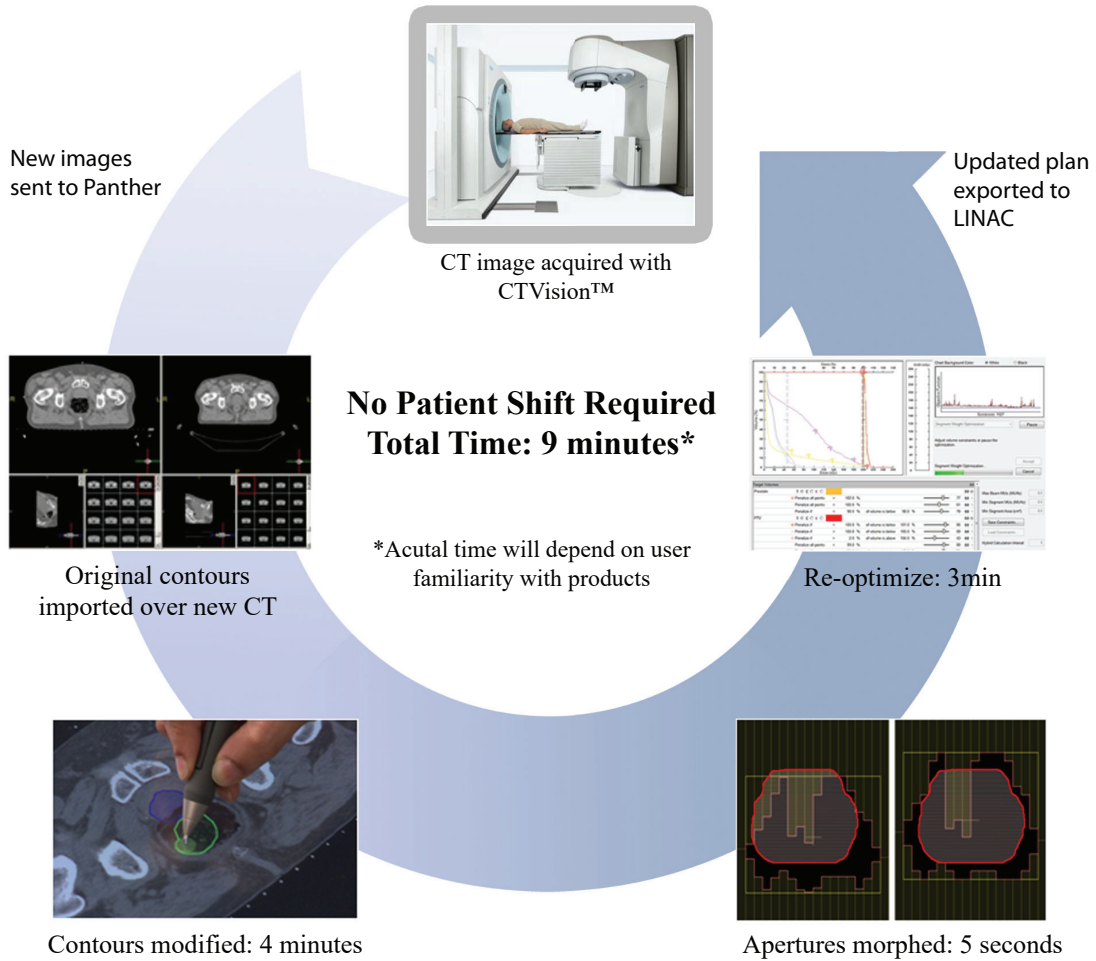
*Treatment with original plan missed the target, overdosing the rectum and causing patient discomfort.*

The introduction of advanced imaging techniques like CT-on-Rails and Cone Beam CT have provided clinicians the ability to track patients' daily bodily changes, but not the means to adjust treatment plans to accommodate anatomical changes during the course of treatment.

### RealART Solution®

The RealART® solution from Prowess Inc. provides the answer to these problems. It allows real-time plan adaptation based on inter-fractional anatomic variations and incorporates current shape and location of tumor - eliminating the need for patient re-positioning. This technique devises the utmost precision of radiation delivery for maximum treatment effectiveness and patient safety.

# RealART® Treatment Process



## Benefits of RealART®

- Treat patients with plans based on the shape of the anatomy on the day of treatment.
- Optimize the plan to a particular treatment fraction.
- Better dose coverage of the targets.
- Real control over dose delivered to spare healthy tissues.
- Patient re-positioning no longer needed.

*This advanced technology is available only from Prowess Inc. and can be used in conjunction with CT-on-Rails systems.*

*\*Image above indicates workflow with Siemens CTVision™ System.*

## Dose Volume Histogram Improvements

