

### Challenges

With increasing market demand for MR-guided focused ultrasound, the beta site aimed to improve the overall treatment experience and increase patient volumes using the latest Exablate Prime Platform from Insightec. This case study evaluates the efficiency improvements of the Prime platform compared to its predecessor, the Exablate Neuro.

### Solution

The Exablate Prime platform utilizes an expanded feature set to decrease treatment duration.

These key features include:

- Intra-operative lesion evaluation scans and advanced scanning capabilities
- Superposition of thermometry and updated dose prediction on improved anatomical images
- Parameter predictor and manual thermal limit to allow for more informed, efficient decision-making
- Shorter temporal thermometry resolution for improved sonication control

### Results

- **Reduced turnover time:** Prime led to measurable reductions in turnover time due to self-disinfecting water system (15 min vs. 40 min) and automated planning and set-up workflows and improved algorithms, which improve interaction with the software and system.
- **Reduced treatment duration:** Prime achieved a mean reduction of 19 minutes in treatment time, representing a 22% improvement.
- **More treatments with shorter duration:** The fastest case completed with Prime took only 33 minutes (first scan to final scan).
- **Increased daily capacity:** The beta site now routinely performs 4 cases per day instead of 3 and has recently performed 2 and 5 cases per day.
- **Potential for reduced sonications:** Prime treatments averaged 6.3 sonications compared to 7.7 for Exablate Neuro with demonstrated significant difference in the two populations.
- **Financial impact:** The facility projects an increase from 135 to 185 patient treatments annually, with the potential for almost \$500,000<sup>1</sup> incremental annual net cash over the previous model.



“

Prime enables me to treat with confidence. The tools and information provided by Prime provide the level of detail needed for decision making in more clinically challenging cases.”

– Ahmed M. Raslan, M.D., FAANS<sup>2</sup>  
Neurosurgeon, Oregon Health & Science University

1. Based on this facility's estimated reimbursement and operating costs

2. The Exablate Prime system was placed at this facility under a market research agreement. Professor Raslan has received clinical or research support from Insightec as well is or has been a paid consultant.

## Objective

This facility partnered with Insightec to evaluate the new Exablate Prime platform, a third-generation MR-guided focused ultrasound system. This case study aims to assess the efficiency improvements of the Prime platform compared to its predecessor, Exablate Neuro.

## Methods

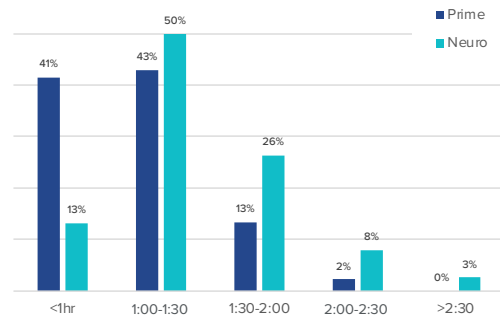
Data was collected remotely from 76 cases using the Exablate Neuro platform and 135 cases using the Prime platform. Treatment duration was measured from the first scan to the final scan, excluding patient preparation and turnover. The facility utilized a Siemens Vida 3T MR system with Insightec's 3T head coil disposable accessory kit (purchased separately) for all procedures.

## Results<sup>3</sup>

	Neuro	Prime
<b>N (cases)</b>	76	135
<b>Treatment Duration (mean)</b>	1:26	1:07
<b>Time Reduction</b>	--	0:19
<b>Time Reduction p-value</b>	--	0.0001
<b>Sonications (mean)</b>	7.7	6.3
<b>Sonication p-value</b>	--	<0.0001

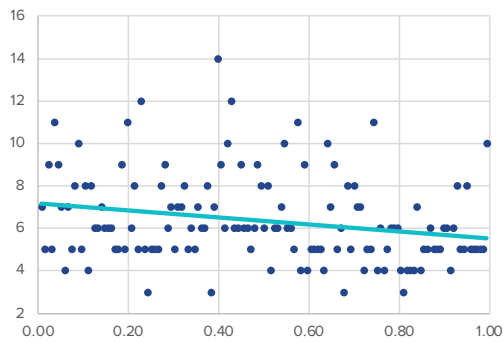
### Treatment distribution by duration

(3x more cases performed in under an hour)



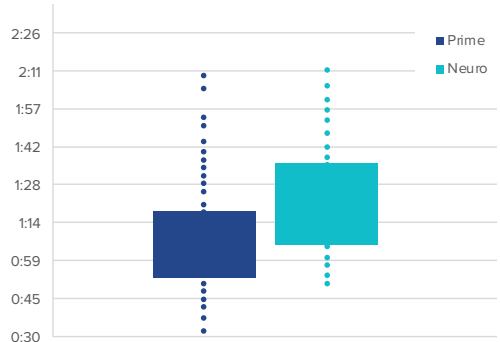
### Sonications per case

(Reduction demonstrated from 1st to last case<sup>2</sup>)



### Case duration boxplot comparison

(Shorter treatment durations observed)



## Discussion

One of Prime development goals was the reduction of treatment time, to enhance both patient experience and treating sites efficiencies. The findings of this case study confirm this goal. In addition, measurable time savings in turnover time were noted due to self-disinfecting water system (15 min vs 40 min) and the planning and set-up workflows enabled by automated workflows and improved algorithms (ex: Auto Registration, No Pass Region and AC/PC detection).

The Exablate Prime platform has demonstrated significant improvements in treatment efficiency and clinical workflow at

this facility. With its user-friendly interface, automated steps, and intelligent algorithms, Prime introduced a streamlined workflow and decision-making efficiencies enabling an increase in cases per day from 3 to 4, yielding 50 more patients treated per year and an annual increase of 135 to 185 patient lives impacted. This increase in cases can accelerate the program's profitability timeline with almost \$500,000<sup>1</sup> incremental, annual net cash over the previous model at 135 cases per year. Of note is that with 4 patient case per day, typically ending before 2PM, there is room to potentially go up to 5 cases per day which this facility has recently implemented.

1. Based on this facility's estimated reimbursement and operating cost  
 2. Individual results may vary  
 3. Data on File with Insightec