

## iSR'obot Mona Lisa 2.0

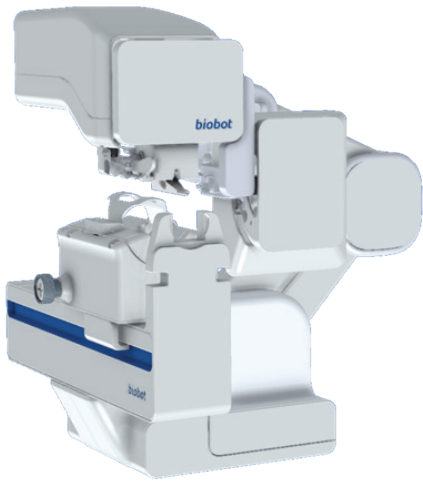


### **Robotic-assisted needle planning and positioning system for prostate fusion biopsy and ablation**

Two skin punctures method is safe, has high accuracy<sup>6,7</sup> and minimal post-procedure complications.<sup>1,2</sup>

The target-saturation biopsy strategy can reduce significant cancer missed rates, improve staging procedures and treatment decisions.<sup>3,4</sup>

Similar csPC detection rates as systematic biopsy in a primary and repeat biopsy setting but with a 50% reduction in biopsy cores.<sup>5</sup>



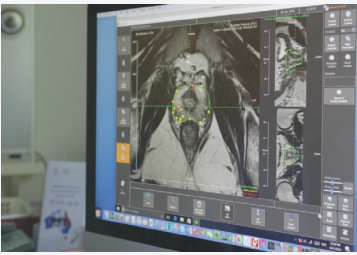
The robotic arm automatically positions and navigates the needle guide holder to guide a needle or multiple needles to the planned locations.

## Transperineal Prostate MR U/S Fusion Biopsy



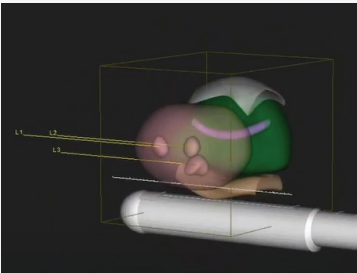
### 1 Ultrasound scan

The probe sheath stabilizes the prostate to minimize prostate deformation during scanning.



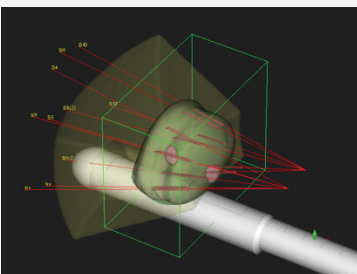
### 2 Prostate model

Create an ultrasound prostate model.



### 3 Create and import MRI model

Create an MRI model using UroFusion before a procedure. Import DICOM T2 prostate images using UroConnect



### 4 Fusion

Elastic fusion to match the imported image onto the prostate model.

### 5 Targeted biopsy planning

Customize a biopsy with UroBiopsy with pre-defined targeted plan

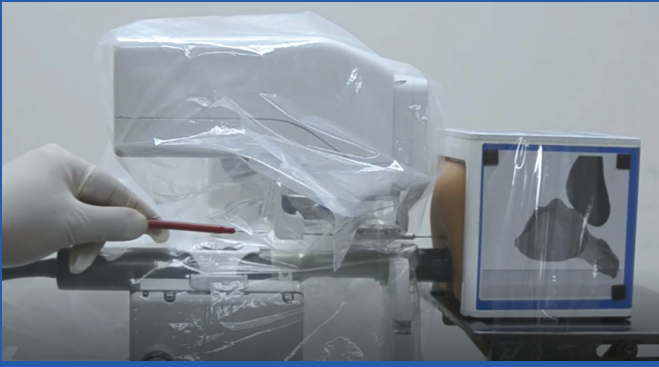
Other biopsy plans available: Systematic and saturation (12, 24, 30 cores) plans.



### 6 Needle positioning\*

Dual-cone needle trajectory technology minimizes infectious

\* An internal bench test shows that the needle positions within 1.0 mm of the planned position



The iSR'obot Mona Lisa 2.0 is designed to facilitate spatial alignment between tumor 3D configuration and needle trajectory.

Transperineal needle trajectory provides access to the apex, dorsolateral, and anterior prostate segments<sup>3</sup>.

The largest diameter of most prostate tumors is along the longitudinal axis (apex to base)<sup>4</sup>.

## Transperineal Prostate Ablation

### 1 Prostate model

Contour the prostate and critical anatomical structures (urethral, rectum, pubic arch).

### 2 Import models

Import the prior biopsy and/or MRI model using UroConnect.

### 3 Fusion

Fuse with the prior biopsy plan and/or MRI model using UroTherapy.

### 4 Therapy planning

#### **Contour lesion margin**

Options: 3mm, 5mm, 7mm and 9mm.

#### **Visualize ablation zone**

Contour iceball based on iceball length and temperature isotherm.

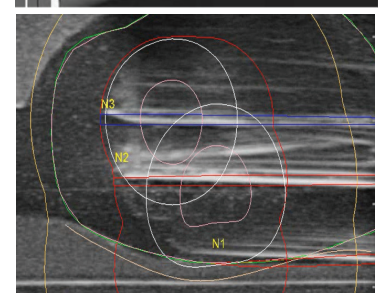
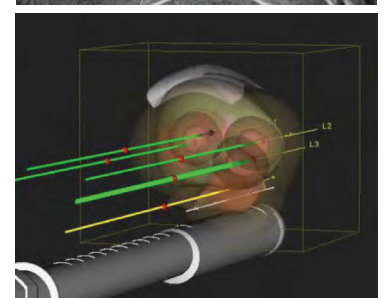
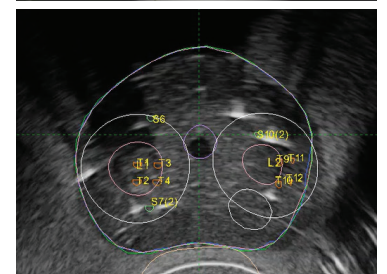
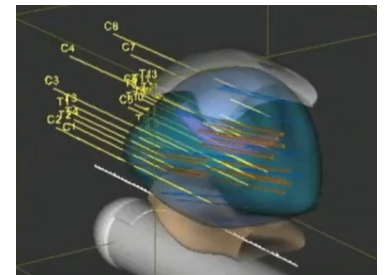
### 5 Needle positioning\*

#### **Robotic-assisted needle positioning**

No template grid required.

#### **Needle trajectory adjustments**

Parallel or angulated needle trajectory.



Intended use: iSR'obot Mona Lisa 2.0 is a user-controlled, stereotaxic accessory intended to guide physicians in the planning and positioning of insertion tools, such as a third-party needle or a probe, during image-guided diagnostic and interventional procedures in conjunction with the guidance of transrectal ultrasound involving the prostate gland in a clinical setting. Examples of such procedures include, but are not limited to, image fusion for diagnostic clinical examinations and procedures, soft tissue biopsies, and soft tissue ablations.

The iSR'obot Mona Lisa 2.0 provides 2D and 3D visualization of Ultrasound images and the ability to fuse and register these images with those from other imaging modalities such as Magnetic Resonance, etc. It also provides the ability to display a simulated image of an insertion tool on a computer monitor screen, the target organ, and the current and projected future path of the insertion tool taking into account patient movement. Other software features include multi-planar reconstruction, segmentation, image measurements, 2D/3D image registration, and reporting.

#### References

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DOC-M-00030 Rev 01

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