iSR’obot™
Mona Lisa
Robotic Prostate Biopsy System
TARGETED BIOPSY WITH PRECISION AND EASE

The iSRobot™ Mona Lisa is a robotic transperineal prostate biopsy system with MRI-ultrasound fusion capability. Designed with both physician and patient in mind, the system enables physicians to perform biopsy with precision and ease.

The software algorithm helps physicians to perform biopsy planning with flexibility, while the robotic needle guide allows automated positioning and depth control of your biopsy needle to the targeted biopsy core.

ROBOTIC NEEDLE POSITIONING AND DEPTH CONTROL

Based on the custom biopsy plan created, the robotic system guides the needle positioning and depth. This allows the planned cores to be collected with ease and accuracy, even at the apex, anterior and peripheral areas.

PROSTATE STABILITY USING ULTRASOUND PROBE SHEATH

Housed in the specially designed probe sheath, the ultrasound probe moves and scans unobstructed. The probe sheath prevents prostate deformation and additionally provides valuable stabilisation.

INNOVATIVE DUAL CONE APPROACH

Mona Lisa’s transperineal dual cone approach creates a virtual pivot point ensuring multiple needle entry through the same channel. This approach is designed to minimise pubic arch interference and enable complete prostate coverage.

AUTOMATED YET FLEXIBLE BIOPSY PLANNING

The intuitive user interface allows mix and match from three biopsy plan options to create a custom biopsy plan. The physician has the flexibility to add, move or delete core location at any time.

ELASTIC MRI-ULTRASOUND FUSION

At one click, the MRI model and ultrasound model fuse instantly, providing 3D visualisation and enabling targeting of the region of interest (ROI).

OTHER FEATURES

Auto Adjust: With a single click, physicians can easily adjust the needle guide to target at desired location.

Motion Compensation: Accommodate for patient’s prostate movements during procedure with fine adjustments of up to 0.2mm precision.

Comprehensive report: Reports are automatically generated with 3D images and clinical data.

Reproducibility: Precise coordinates taken of each biopsy sample allows for accurate repeat procedures to be carried out, thus facilitating active surveillance.
Mounted on the robot arm, the ultrasound probe moves and scans automatically to obtain a series of 2D images. From the 2D images, the physician marks out the prostate boundaries to facilitate 3D model reconstruction.

Before the biopsy, the radiologist performs MRI scan on the patient, and uses UroFusion to model MRI prostate and mark the ROI. The imported MRI model fuses with the ultrasound model instantly. The Target Plan and Saturation Plan options automatically generate core locations based on ROI and entire prostate respectively. Based on the biopsy plan, the robotic needle guide and needle stopper are automatically and precisely positioned. The physician inserts the biopsy needle and obtains cores with speed and accuracy. Comprehensive reports are automatically generated with clinical data and 3D images.

The targeted robotic biopsy system aims to set a new standard for accurate biopsy core collection. Not only helping physicians to detect prostate cancer in patients early, the accurate targeting also provides confidence to enroll patient in active surveillance program.

Using the transperineal approach together with Mona Lisa’s innovative two needle entry points, the infection rate is close to zero1.

**iSR’obot™ MONA LISA**

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**SPECIFICATIONS**

**SIZE AND WEIGHT**

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<tr>
<th>Dimension/Weight</th>
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<tbody>
<tr>
<td>Overall Dimensions</td>
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<tr>
<td>Weight of iSR’obot™ Mona Lisa</td>
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<td>Weight of Robot Arm</td>
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**RANGE / ACCURACY**

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<th>Range/Accuracy</th>
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<td>Cover Range</td>
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<td>Mechanical Accuracy</td>
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**OPERATING ENVIRONMENT**

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<th>Environment</th>
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<td>Humidity</td>
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<td>Barometric Pressure</td>
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**ELECTRICAL INFORMATION**

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<td>Voltage</td>
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**CERTIFICATIONS**

- FDA (U.S.A)
- CE mark (Europe)
- TGA (Australia)
- HSA Singapore
- EN ISO 13485:2012

**ABOUT US**

Biobot Surgical Pte Ltd is a Singapore company incorporated in 2007. We aim to be a global technology leader in minimally-invasive robotic healthcare solutions.

We use our technology to improve diagnostic and treatment accuracy for patients.

We develop state of the art solutions to improve clinical outcome, and hence improve quality of life.