

# Wireless breast lesion localization and lymphatic mapping technologies

## Breast Lesion Localization

**endomag<sup>+</sup>**

**MagSeed**



- Visible on U/S, mammo., CEDM
- Bracketing with seeds 20mm+ apart
- No chip or antenna
- 98% placement accuracy
- 99.9% retrieval rate

**SentiMag**



- Millimeter-accuracy detection
- Slim handheld smart probe
- Instant audio feedback

## Lymphatic Mapping

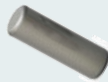
**MagTrace**



- Iron oxide + sugar + salt + water
- Optimized for migration and uptake
- Single injection
- 30-day detection window

**sirius medical**

**Pintuition Seed**  
5mm permanent magnet



**Pintuition Base Unit**  
Real-time audio & visual feedback  
Navigational guidance



**Pintuition Probe**  
Multi-sensor technology  
3D magnetic sensors



**molli<sup>®</sup>**

**MOLLI / re.markable Marker**  
3.2mm permanent magnet



**re.markable Marker**  
can be removed and repositioned as needed

**MOLLI Tablet**  
IV-mount  
Distance, visual, auditory, & directional feedback



**MOLLI Wand**  
Works with standard electrocautery; 10mm tip;  
Repeat sterilization options



**Elucent Medical**

**SmartClip**  
1.4mmx8mm RFID



**Patient Pad**  
Enables tracking



**EnVisio**  
Portable touchscreen display  
IV-mount



**NaviSlim**  
Works with standard electrocautery



**stryker<sup>®</sup> SPY-PHI**

**SPY Portable Handheld Imaging System**  
**SPY Agent Green (ICG)**  
Non-inferior to Tc-99m and gamma probe



**Overlay Mode**  
Green fluorescence  
**SPY CSF Mode**  
Varying fluorescence intensity  
**SPY Mode**  
Grayscale fluorescence



# Comparison of Wireless Localization Technologies

	Endomag MagSeed	Sirius Pintuition	MOLLI Marker	Elucent SmartClip
Seed Length	5 mm	5 mm	3.2 mm	8 mm
Seed Type	Transient magnet	Permanent magnet	Permanent magnet	RFID
Needle Size	18-gauge	14-gauge	14-gauge	15-gauge
Signal Depth	40 mm <sup>A</sup>	50 mm	53 ± 9 mm <sup>A</sup>	350 mm
Localization Feedback	Audio, visual (distance)	Audio, visual (distance, direction)	Audio, visual (distance, direction)	Audio, visual (distance)
Location Accuracy	1 mm	1 mm	1 mm	1 mm
Workflow Coordination	<i>Radiology and surgery do not require same-day coordination</i>			
Re-operation Rate Study description	12.4% <sup>B</sup> Large cohort studies; no RCTs	4% <sup>B</sup> Small cohort studies, 1 small RCT	0% <sup>B</sup> Small phase I cohort study	<5%
Regulatory Status	FDA 510(k) CE Mark	FDA 510(k) CE Mark	FDA 510(k) HealthCanada	FDA 510(k)
Price	<i>\$400-500 across all products</i>			

(A) [Nicolae 2019](#); (B) [Banyas-Paluchowski 2023](#)