sysmex | Lighting the way with diagnostics

PUBLICATION SPOTLIGHT

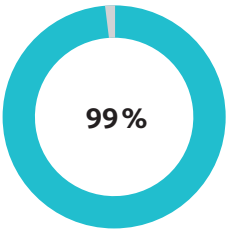
Sentimag® – Magseed®

Targeted Axillary Dissection (TAD) – results from 200+ target node localisations

Breast cancer patients diagnosed with clinically positive lymph nodes often receive neoadjuvant systemic therapy (NAST) with the aim to downstage or eradicate the disease. To accurately assess the response in the breast and the axilla, it is important that both the positive lymph node/s and the breast lesion are marked before NAST to be able to locate them later on. Systemic therapy can negatively impact lymphatic drainage and hence reduce the accuracy of the sentinel lymph node biopsy (SLNB). However, when SLNB is paired with removal of the previously positive target lymph node, a technique called Targeted Axillary Dissection (TAD), the operation becomes a lot more accurate. Studies of TAD have demonstrated a false negative rate of < 2 % compared to SLNB alone. (Caudle et al. JCO 2016)

The Magseed® marker has already been used to safely and effectively localise over 40,000 breast lesions and axillary lymph nodes. Its small size makes it the ideal marker for TAD and can now be implanted in any soft tissue for as long as required. Clinical studies involving over 200 patients globally have demonstrated accurate placement, no migration once implanted and accurate removal. In addition to improving clinical outcomes, it also offers a better patient experience and promotes seamless radiology and OR scheduling. When the Magseed® marker is used in combination with the lymphatic tracer Magtrace®, they offer the world's only wire-free, radiation-free solution for TAD in one platform.

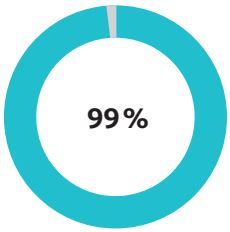
Placement success



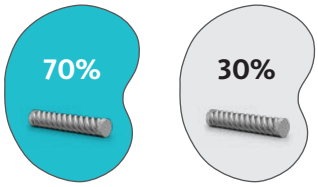
Longest placement to surgery time

Range = 0 – 155 days

Retrieval rate



Nodal identity



Sentinel node

Non-sentinel node

Clinical study results – selection

First author	Patients	Seeds placed	Placement success	Longest placement to surgery time	Retrieval rate	TLN = SLN
Salazar Gomez[1]	28	29	100 %	ND	100 %	52 %
Benn[2]	4	5	100 %	155 days	100 %	ND
Greenwood[3]	35	38	97 %	31 days	97 %	ND
Sinnett[4]	15	15	93 %	ND	93 %	86 %
Miller[5]	ND	129	100 %	ND	100 %	ND
Simons[6]	50	50	100 %	30 days	100 %	80 %

www.sysmex-europe.com/magseed

Target lymph node localisation – clinical results

Publications

[1] Salazar Gomez et al. (2019): *Utilidad de la semilla magnétice para la localización de los ganglios mercados tras tratamiento neoadjuvante. 4th Spanish Breast Congress. [open access]*

[2] Benn C et al. (2019): *The use of Magseed to localise loco-regional lymph node recurrences prior to chemotherapy. ESSO39-0509. [abstract]*

[3] Greenwood H et al. (2019): *Feasibility of Magnetic Seeds for Pre-Operative Localization of Axillary Lymph Nodes. AJR 213: 1-5. [abstract]*

[4] Sinnett V (2019): *Magnetic seeds: An attractive localisation option for management of axillary node positive breast cancer. EJSO 45(5): 889. [abstract]*

[5] Miller et al. (2019): *Hospital system rollout and initial experience with stainless magnetized seeds for breast and lymph node localization. Ann. Surg. Oncol. 26(suppl. 1). [abstract]*

[6] Simons JM et al. (2019): *Prospective Trial of Magnetic Seed Localization of Clipped Nodes after Neoadjuvant Chemotherapy in Node Positive Breast Cancer. Ann. Surg. Oncol. 26(suppl. 1). [open access]*

Ongoing studies

[7] *NCT03796559 - Magseed Enabled Long-Term Localization of Axillary Lymph Nodes (MAGELLAN). 65 patients, recruiting. Sponsor: Endomagnetics. Site: M.D. Anderson Cancer Center*

[8] *NCT03718455 - Evaluation of Magseed as Localization Device for Biopsy Proven Metastatic Axillary Lymph Nodes. 20 patients, recruiting. Sponsor and site: Mayo Clinic, Rochester*

Last update December 2019

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ZE004026.EN.N.12/19