Imaging Agents for Detection and Treatment of Breast Cancer

UA ID Technology #ua17-180

Title: Imaging Agents for Detection and Treatment of Breast Cancer

Invention: The invention is a breast cancer metastasis-targeting agent capable of identifying boundaries between normal and diseased tissues. These synthesized agents will bind to tumor cells, allowing surgeons to reliably remove diseased tissues.

Background: Surgical biopsy of the sentinel lymph nodes (SLN) is an invasive and expensive burden for patients. It is common for patients to feel short-term pains, swelling and bruising after their SLN biopsy. Numerous untargeted agents, like sulfur colloids, blue dyes and nanomaterials, have been used to identify SLN while lymph node mapping remains an industry standard for the prognosis of breast cancer. Through targeted identification of auxiliary lymph node (ALN) metastasis, this technology can eliminate the need for sentinel node excision, which reduces the risk of pain or infection.

Applications:
- Cancer research
- Breast cancer

Advantages:
- Eliminates need for SLN mapping
- Able to reliably detect and selectively remove only diseased lymph nodes
- Non-invasive

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