

توسعه صنایع تصویر برداری پرتو نگار پرشیا
طراحی و تولید سیستمهای تصویر برداری
Parto Negar Persia Co.

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تلفن: ۰۲۱ - ۶۶۹۰ ۷۵۳۲ فکس: ۰۲۱ - ۶۶۹۰ ۷۵۳۲

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INTRAOPERATIVE LOCALIZATION OF
SENTINEL LYMPH NODES PROVIDED BY
SURGEOSIGHT & SURGEGUIDE



Providing Ultimate Solution for Surgery

SURGEOSIGHT

Intra-Operative Gamma Camera



SURGEOSIGHT is a portable mini camera developed for pre-surgical lymphoscintigraphy thyroid scan and intra-operative localizing sentinel lymph nodes. Lymphoscintigraphy and sentinel lymph node biopsy is an area of increasing utility in determining which lymph node basins serve the diseased tissue. The presence or absence of regional lymph node involvement often determines the staging and treatment of many malignant tumors. In some clear words, it can play the role of a "Surgeon's sight" in an operation room.

Specifications:

- number of pixels: 36×36
- pixels size: $1.2 \text{ mm} \times 1.2 \text{ mm}$
- PSPMT: H8500
- Field of view: $42 \text{ mm} \times 42 \text{ mm}$
- Spatial Resolution: $<2.5 \text{ mm FWHM @}$
Collimator surface
- Sensitivity @ Collimator surface:
 $320 \text{ cpm}/\mu\text{Ci}$ for TC-99m
- Energy Range: $60 - 300 \text{ keV}$
- Weight: 1.2 kg

Applications:

- Pre-operative Lymphoscintigraphy
- Intra-Operative Sentinel Node Detection
- Scintimammography
- Radio-Guided Surgery
- Thyroid Scanning
- Small Organs Imaging



SURGEGUIDE

Gamma Probe



SURGEGUIDE is a hand-held device for intra-operative use following interstitial injection of a radionuclide, to locate regional lymph nodes by their radioactivity. It is used primarily for sentinel lymph node mapping and parathyroid surgery.

The intraoperative gamma probe technology with **SURGEGUIDE**, is based on the injection in the tumor site of a radiopharmaceutical agent that emits gamma rays while it drains towards the lymphatic system. With the help of the gamma probe, the surgeon expeditiously locates the hot sentinel node(s) or cancerous tissues to be pathologically analyzed as these locations accumulate the radiopharmaceutical agent and have a higher gamma count rate than the background.

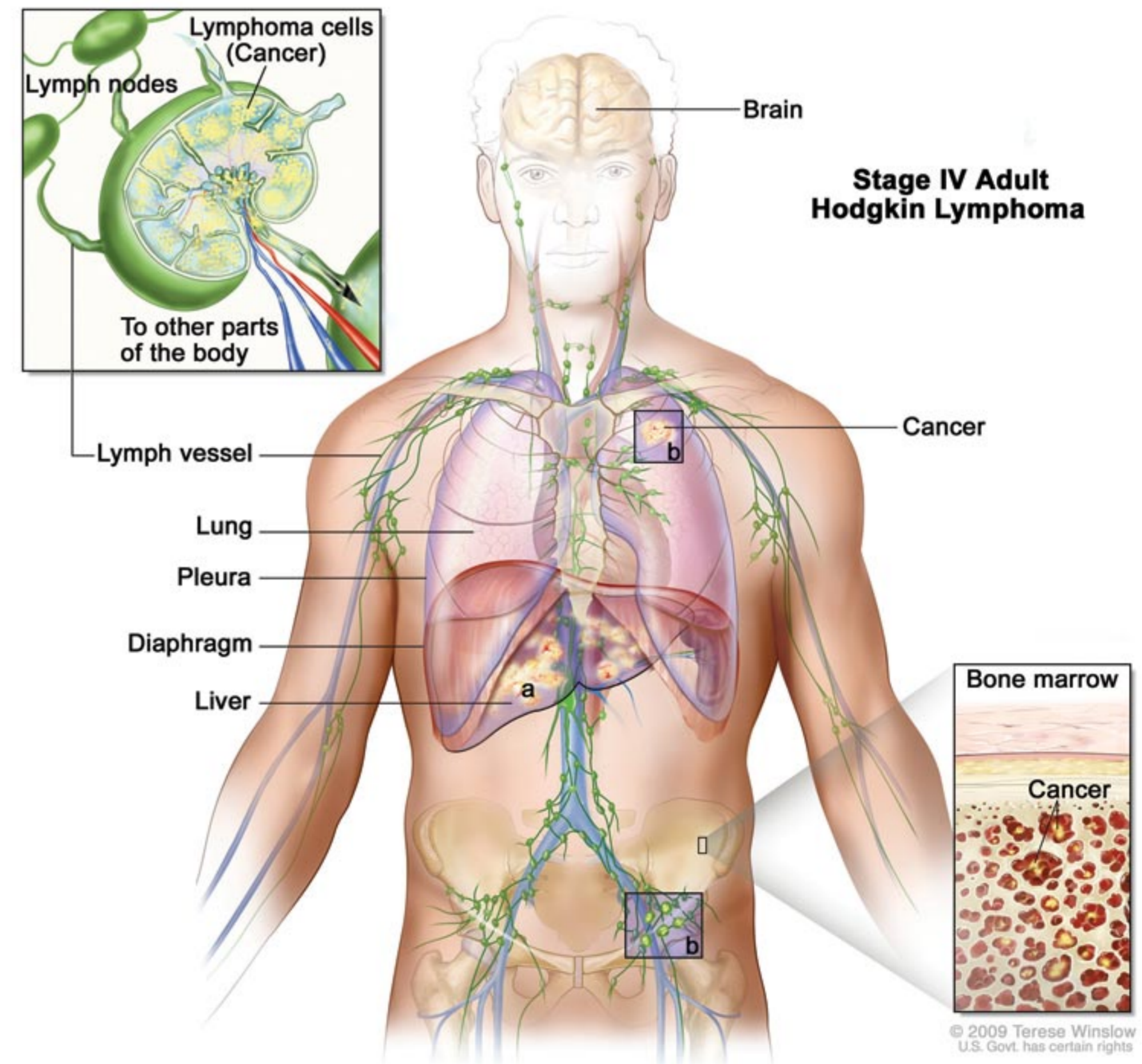
This technique has become widely accepted in surgical oncology.

Specifications:

- Sensitivity: >2 cps/KBq @ face surface
- Side shielding: 99.9 % for Tc-99m
- Energy Resolution: <11% FWHM for Tc-99m
- Length: 21 cm
- Face Diameter: 16 mm
- Stainless Steel Body , Tungsten Collimator
- Angular Resolution: <30°, 80° (optional)
- Local Resolution: <20 mm FWHM at 5 cm distance

Clinical Applications:

- Breast cancer
- Gynecological cancers (cervical, ovarian, uterine, vaginal and vulvar)
- Melanoma and other types of skin tumors
- Head & Neck
- Endocrine cancers (thyroid, parathyroid)
- Urology cancers (prostate, bladder, testicular, kidney and penile)
- Nuclear Medicine (localization of gamma labeled areas)



The main benefits of using **SURGEOSIGHT & SURGEGUIDE** on cancer patients' surgeries are:



1. provides vital and real time information about the location and extent of disease and resection margins
2. Helps decrease the surgical time, the patient morbidity and improves the staging accuracy
3. Allows the surgeon to minimize the surgical invasiveness of many diagnostic and therapeutic procedures, whilst maintaining the cancer patient