

Indocyanine Green Sentinel Lymph Node Biopsy in Oral Cavity Cancer

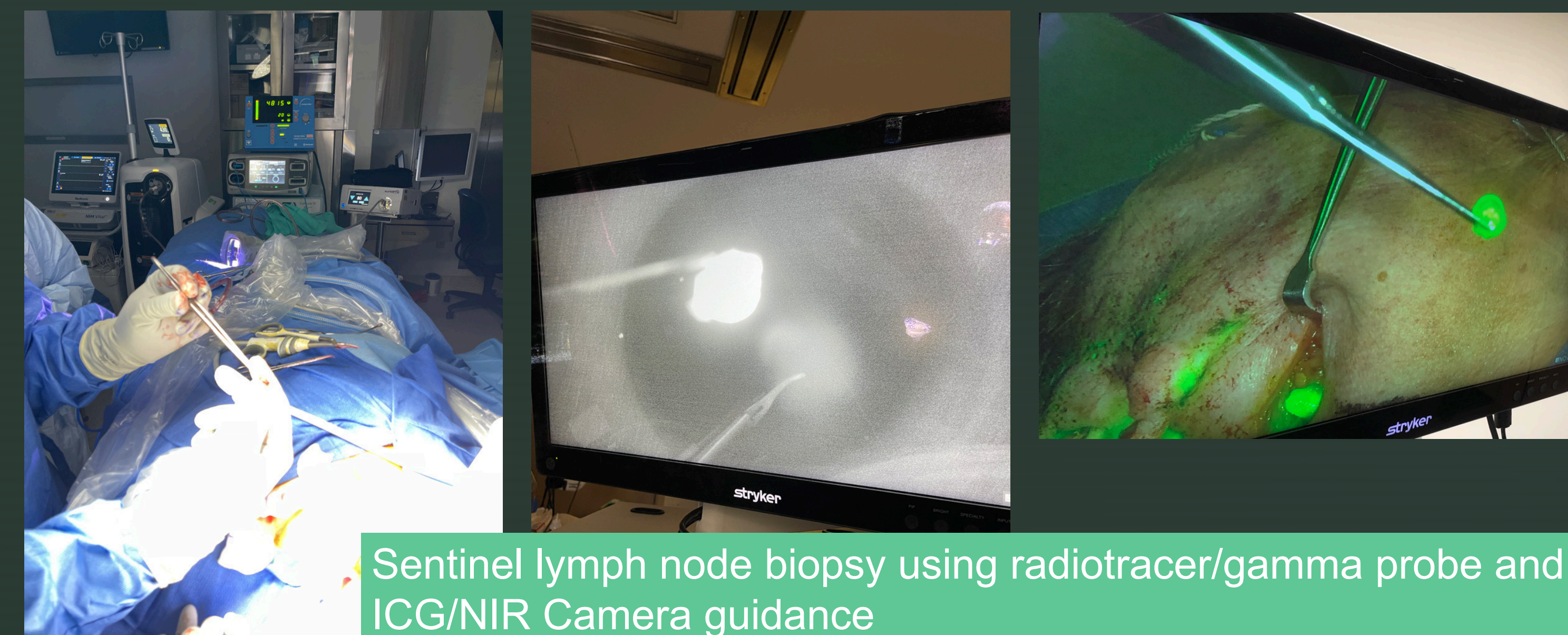
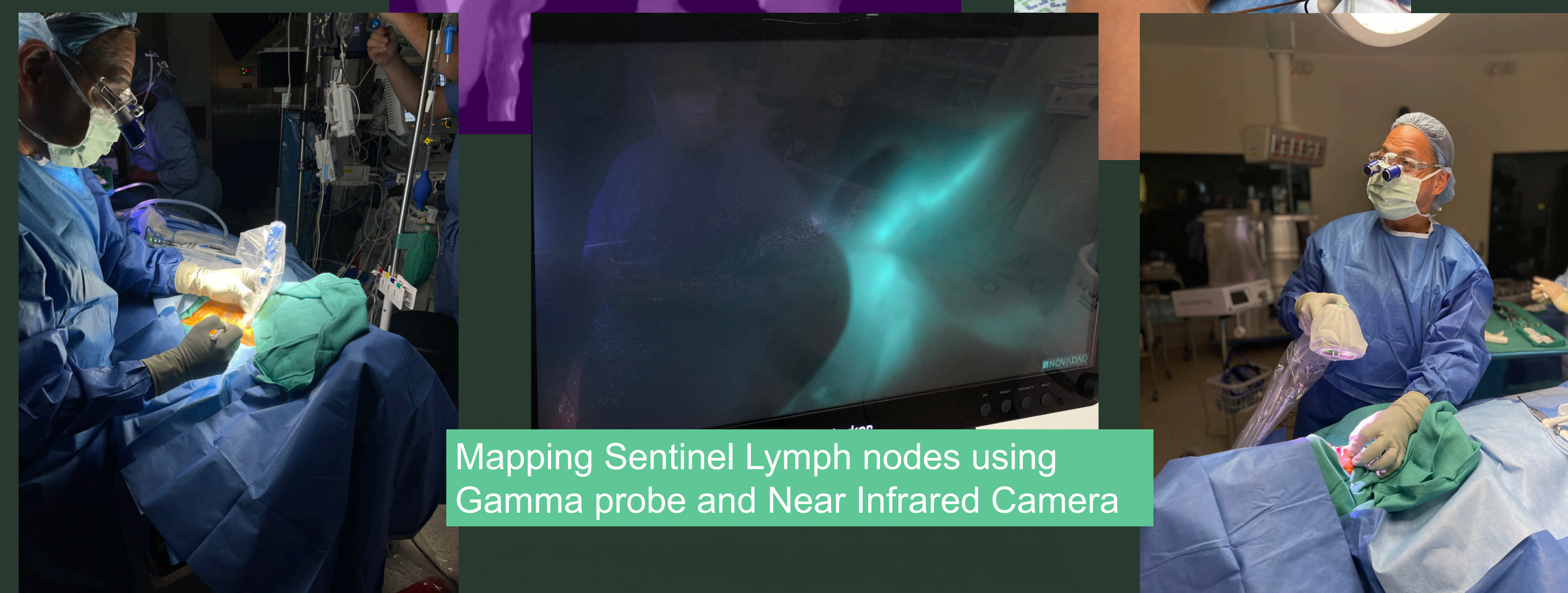
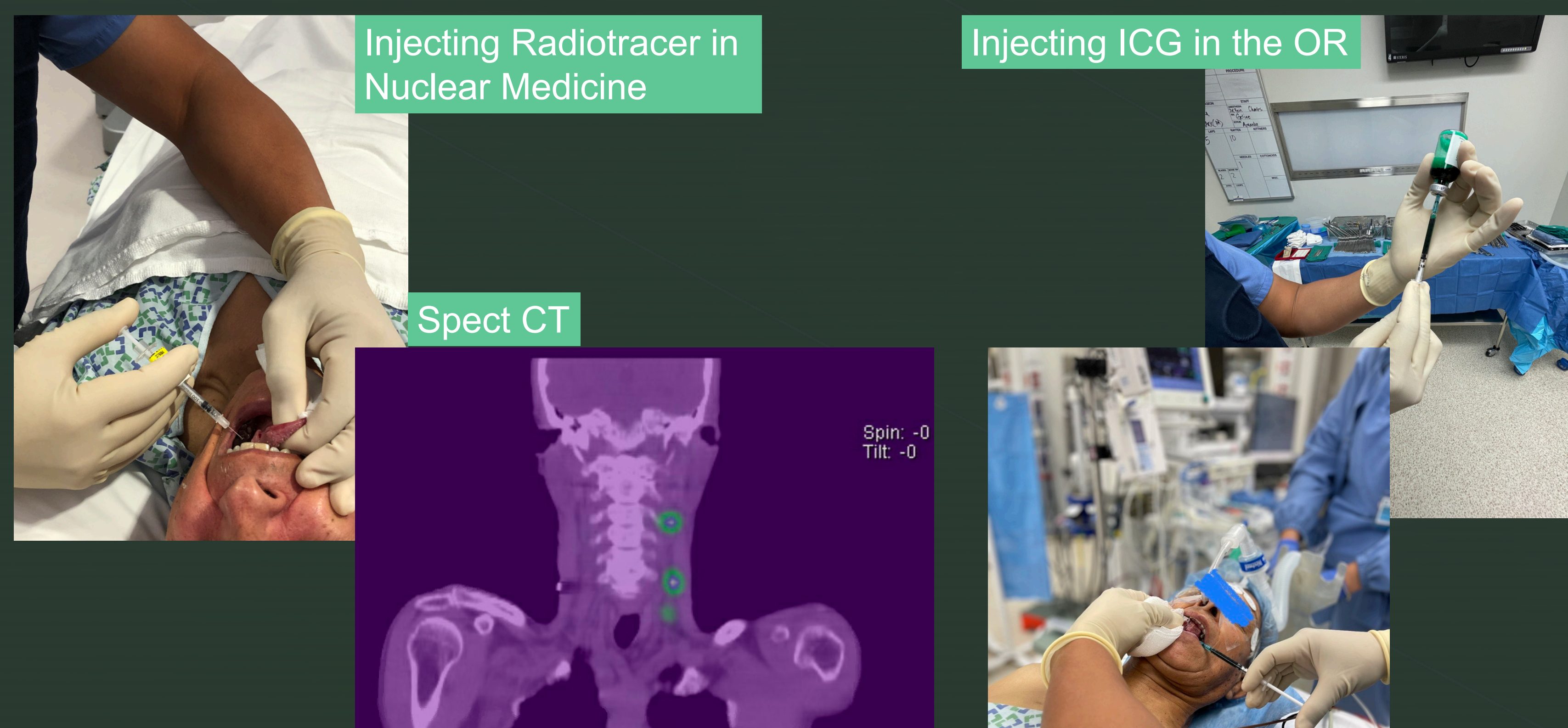
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Introduction:

This is a review of our experience using Indocyanine Green (ICG) as an optical tracer in conjunction with radio guided surgery for sentinel lymph node biopsy with an oral cavity primary. Sentinel lymph node biopsy has become accepted to stage early oral cavity malignancy, so finding an adjunct to radioguidance to replace blue dye maybe useful for a better yield of sentinel lymph nodes which can impact patient treatment and prognosis.

Methods:

This is a retrospective chart review of the use of Indocyanine Green (ICG) as an optical tracer with radio guided surgery for sentinel lymph node biopsy for oral cancer. Patients undergoing sentinel lymph node biopsy in the head and neck for an oral cavity primary from January 2020 to December 2022 were reviewed. Data includes patient demographics, co-morbid conditions, location of primary, number of sentinel lymph nodes identified, number of lymph nodes with discrepant results between the two techniques, morbidity, and mortality.



Results:

There were 38 patient who underwent sentinel lymph node biopsy using ICG and radio tracer from January 2020 to December 2022. Five patients had oral cancer. Male to female ratio was 4:1. Common co-morbid conditions are diabetes, hypertension, benign prostatic hyperplasia, hypercholesterolemia, GERD and thyroid disease.

Four had Tongue cancer and the other in the floor off mouth. 60% (3 patients) had T2 and 40% (2 patients) had T1 tumor. Average depth of invasion (DOI) was 4.82 mm (range 2-7 mm).

The total sentinel lymph nodes identified for the cohort was 19. The average number of sentinel lymph nodes per patient was 3.8 (range 1-7). All nodes identified as positive using the radiotracer were also positive using ICG. 21% of sentinel lymph nodes were positive only using ICG with 2/5 patients (40%) having sentinel lymph nodes not positive by radio tracer but only with ICG.

No morbidity or mortality was identified by adding ICG.

Conclusions:

Sentinel lymph node biopsy using ICG in combination with radio-guided surgery appears safe and effective for patients with early oral cancer. The yield is higher using the combined technique versus only using radio guidance.