# The Effectiveness Of Intraoperative Administration Of Both Radioactive Isotope And Blue Dye Without PreSurgery Gamma Imaging In Comparison With The Conventional Technique For Sentinel Node Biopsy.

**AIM**

To study the effectiveness of intraoperative administration of both radioactive isotope and blue dye without pre-surgery gamma imaging (dual technique) in comparison with the conventional technique for sentinel node biopsy.

**METHODS AND MATERIALS**

Retrospective observational trial.

First cohort from 2014 to 2017 and second cohort from 2018 to 2020.

**2018-2020:** (New Technique) Intraoperative dual SLN mapping technique consisted of subareolar injection of Tc 99m labelled filtered Sulphur colloid and 1.5 to 2ml of 1% Iodosulphan blue dye just after induction of anaesthesia followed by locating and dissecting the SLN using activity detected by hand-held gamma probe and blue colour.

**2014-2017:** (Conventional technique) Inject technetium 99m labelled sulphur colloid in the nuclear medicine department, then scan under the gamma camera for a period ranging from 15 to 45 minutes, mark the position of the sentinel node on the skin and then shift patient to OT where the blue dye is injected after induction of general anaesthesia.

The injection was done on the morning of surgery if it was the second case or the previous evening if it was the first case.

**RESULTS**

Out of the total 440 SLNs, 202 were done using the conventional technique from 2014 to 2017 and 238 using dual technique from 2018 to 2020.

SLN detection rates with intraoperative dual mapping technique was 97.47% while that of the conventional technique of SLN identification was 97% (p=0.77).

Using the conventional technique there were 6 cases were the SLN was negative but non-SLN nodes turned out to be positive and in dual technique there were 2 such cases.

**CONCLUSIONS**

SLN detection rate of intraoperative dual technique was equivalent to conventional technique. Thereby, even in the absence of Nuclear medicine facility within the hospital, the SLNB can still be performed by procuring the radioactive colloid from a source at a distant site in the same town or city and using the hand-held gamma probe without any decrease in sensitivity or detection rates.

**DISCLOSURE**

All the authors declare that there is no conflict of interest.