



Neuroendocrinology

Brief description of the work done

Projects running

Project title-

Analysis of molecular subtypes of neoadjuvant chemotherapeutic treated (NACT) breast cancer in Indian patients.

Principal investigator

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In this study prevalence of different molecular subtypes of breast cancer (BC) in Indian patients were analyzed. For better therapeutic intervention, the patients were grouped based on (a) age of onset and (b) hormone receptors (Estrogen receptor: ER and Progesterone receptor: PR) and epidermal growth factor receptor 2 (HER-2) status i.e.

- i. Luminal A (ER+ and/or PR+, HER2-)
- ii.* ii. Luminal B (ER+ and/or PR+, HER2+)
- iii.* iii. HER2 enriched (ER-, PR-, HER2+) and
- iv.* iv. Triple negative subtype (ER-, PR-, HER-)

Neoadjuvant treatment of breast cancer has become established as the safe and often effective therapeutic approach of choice for larger primary and for locally advanced breast cancer. For this purpose, freshly operated 41 neoadjuvant chemotherapy treated (NACT) BC tissue samples were collected from the hospital section of the Chittaranjan National Cancer Institute (CNCI), Kolkata. The expression status of the ER, PR and HER2 were checked by immuno-histochemistry. Scoring was done as per the recommended American Society of Clinical Oncology (ASCO) guidelines.

Among these NACT BC samples, highest frequency of Her2 receptor expression (39.04%) was observed followed by ER (31.7%), PR (29.2%) [Table-1]. In addition, 29% samples did not show any expression

among these three types of receptors.

Table-1: Prevalence of ER, PR and HER2 receptors expression in NACT BC samples.

treated(NACT)breast cancer N=41
Estrogens Receptor (ER) 13 [31.7%]
Progesterone Receptors (PR) 12 [29.2%]
human epidermal growth factor
receptor 2 (HER2) 16 [39.04%]
All three receptors negative 12 [29.2%]