Oration of the 09<sup>th</sup> Academic Sessions

# Prognostic and predictive parameters of breast cancer: The role of pathologist in the Sri Lankan perspective

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## Abstract

Breast cancer has been and continues to be a major health problem. The incidence of breast cancer has increased globally over the last several decades and the greatest increase has been seen in Asian countries. It has become the commonest cancer in Sri Lanka irrespective of the gender. Although breast cancer is a cancer with a good prognosis if detected and treated early, most of our patients seek medical attention at an advanced stage of the disease. Most of them have high grade tumours.

Breast cancer comprises an extraordinarily diverse group of diseases in terms of presentation, morphology, biological characteristics and clinical behaviour. Tumours of apparently homogenous morphology still vary in response to therapy and have distinct outcomes. Therefore, management of breast cancer has become a challenging task. The role of the pathologist has evolved parallel to the improvements in the management. The traditional role of pathologist was to diagnose breast cancer, but the emerging challenge is to provide the maximum prognostic and predictive information so that the best tailored therapy is given to the patient.

Prognostic factors are important for forecasting outcomes in individual patients and can be used to refine treatment choices. Predictive factors are measurements associated with the degree of response to a specific therapy. At present hormone receptor status is the well defined predictive factor of breast cancer in predicting the responsiveness to hormonal therapy. The recommended prognostic and predictive factors of breast cancer include age, tumour size, axillary lymph node status, histological tumour type, pathological grade, hormone receptor status and the Her 2 expression of the tumor. There are many more pathological parameters which are yet to be included in the recommended list.

Except for the age of the patient all the other recommended prognostic and predictive factors mentioned are assessed by the pathologist. Therefore, the histopathology report is considered the gold standard to decide on the treatment of breast cancer. Hormone receptor status of breast cancer is an essential component of surgical pathology report of a breast cancer as it decides the selection of adjuvant

hormonal therapy. Patients with hormone receptor positive breast cancers have a favourable response to endocrine therapy and improved survival. Hormone receptor expression of breast cancers in Sri Lanka is low and deviates from the global pattern. Only 32 to 53% of breast cancer patients in Sri Lanka benefits from hormonal therapy. Measures at national level should be taken to increase the early detection of breast cancer to improve the outcome as most of our patients have aggressive tumours.