Cancer Core Europe Lecture

Presented by Education & Training Task Force

SPEAKER

Linda Lindström

Assoc. Professor
Principal researcher
Dept. of Oncology Pathology
Karolinska Institutet

Insights into the heterogeneity of ER-positive breast cancer – late risk of metastatic recurrence & endocrine treatment benefit

Date: Friday March 28 – **Time:** 13:30 CET

Link to Zoom

Breast cancer (BC) is a heterogeneous disease with the main fundamental difference being whether the tumour is hormone-sensitive or not, i.e. oestrogen receptor-positive (ER+) or negative (ER-). A unique feature of ER+ BC is the long-term risk of metastatic recurrence decades after initial diagnosis, and half or more of all BC metastases in this patient group will be diagnosed LATE i.e. beyond 5 - 10 years after diagnosis as shown by us and others [Johansson & Lindström *et al*, JCO 2022; Richman & Dowsett, Nat Rev Clin Oncol 2019; Yu & Lindström *et al*, JAMA Oncology 2019; Pan *et al*, NEJM 2017].

The factors underlying late risk of metastatic recurrence remain poorly understood. Current research is mainly focused on early risk, partly due to the lack of tumour samples from patients with complete longterm follow-up. Late risk is clinically important in particular for younger premenopausal patients with a long post cancer life expectancy, but also decades of fear about disease recurrence. Young premenopausal women with BC have a worse prognosis as compared to postmenopausal women, and menopausal status itself has been suggested to be an independent risk factor related to the hormonal milieu. My research focus is on longterm risk of metastatic disease, and how risk and endocrine treatment benefit is influenced by menopausal status and tumour biology including standard tumour markers, intra-tumour heterogeneity, and tumour microenvironment using unique clinical trials with complete longterm follow-up.

Associate Professor Linda Lindström, PhD, is a translational breast cancer researcher and research group leader since 2015. She is Associate Professor in cancer epidemiology at KI, with her PhD in cancer epidemiology from the Dept of Medical Epidemiology & Biostatistics, KI. She held two post doctoral positions in translational breast cancer research at the Dept of Oncology - Pathology, KI, and at the Dept of Surgery, University of California San Francisco (UCSF), and is currently Co-director of Cancer Research KI (CRKI), leading the CRKI working group on research. She is also part of the leadership group at her department and chairs the Stockholm tamoxifen trialists group.

A unique feature of estrogen receptor-positive (ER+) breast cancer is the longterm risk of metastatic disease, sometimes occurring decades after initial diagnosis. Her research focuses on elucidating the mechanisms behind this prolonged risk and the benefit of endocrine treatment from a long-term perspective, by exploring the influence of intra-tumor heterogeneity and the heterogeneous ER+ tumor microenvironment.

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