

# Silver In Situ Hybridization (SISH) for HER2 Gene Amplification in Breast Carcinoma: A Diagnostic and Technical Masterclass

Workshop President:

**Prof. Dr. Neveen Tahooun**

Organizer and Scientific Coordinator:

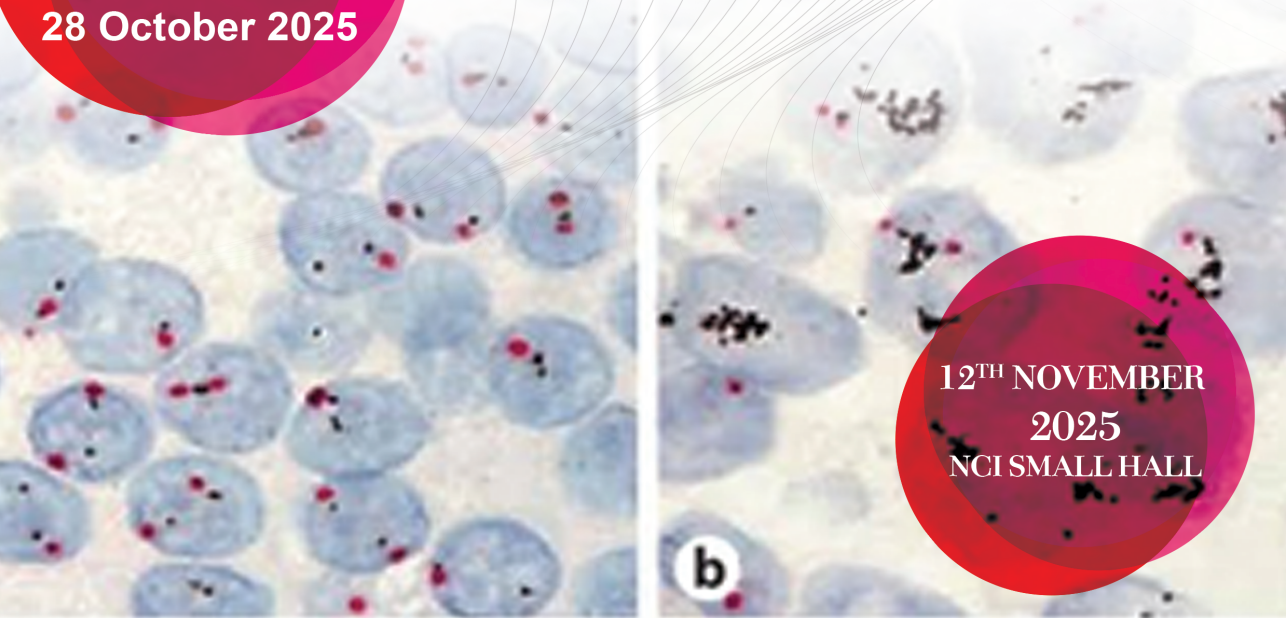
**Dr Noura Ebrahim**

Faculty and Mentors:

**Dr Noura Ebrahim Dr Nansy Amin**

Registration  
for workshops  
closes on  
28 October 2025

12<sup>TH</sup> NOVEMBER  
2025  
NCI SMALL HALL



Wednesday  
12-11  
2025

## Registration

08:30  
09:00

Wednesday  
12-11  
2025

## Opening Remarks & Objectives

09:00  
09:15

**09:15-09:45**

Session I – Molecular Basis and Diagnostic Framework  
Biology of HER2 (ERBB2) gene in breast cancer  
Mechanisms of gene amplification and overexpression  
Overview of HER2 testing modalities: IHC, FISH, CISH, SISH  
Positioning of SISH within current ASCO/CAP guidelines  
Interpretation thresholds and clinical decision-making implications

**09:45-10:30**

Session II – Technical Protocol for HER2 SISH  
Pre-analytical considerations: FFPE tissue quality, section thickness, antigen preservation  
Reagent and probe selection  
Standardized protocol steps:  
Deparaffinization and enzymatic digestion  
Hybridization conditions and probe specificity  
Silver chromogenic detection  
Counterstaining and slide finalization  
Common technical pitfalls and mitigation strategies

**10:30 – 12:00**

Session III – Integrated Practical Module and Interpretative Review  
Hands-on training: Stepwise execution of HER2 SISH protocol using demonstration slides or Interpretation session:  
Microscopic evaluation of HER2 SISH signals  
Gene copy number assessment  
HER2/CEP17 ratio analysis  
Classification: non-amplified, equivocal, amplified  
Equivocal cases and reflex testing algorithm

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**12:00 – 12:30**

**Break**

**12:30 – 13:30**

Session IV – Quality Assurance and Standardized Reporting  
Documentation of validation, reproducibility, and  
control performance Internal quality control (IQC) and  
external quality assessment (EQA) strategies  
Reporting in accordance with ASCO/CAP standards  
LIS integration, audit trail, and compliance

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**14:00 – 13:30**

**Closing Session**