

# CDK 4/6 INHIBITORS: EVOLUTION OF THE PARADIGM

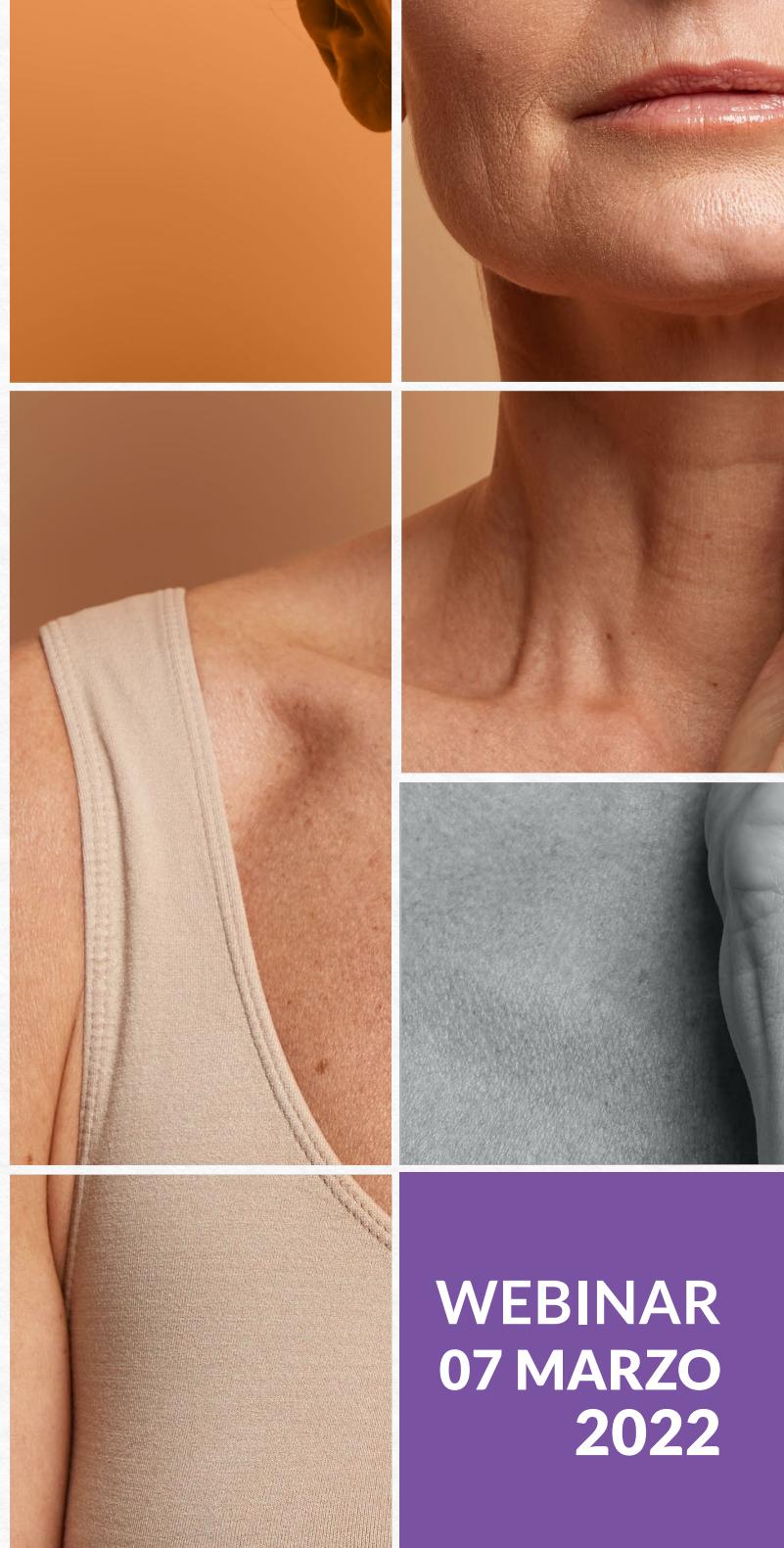
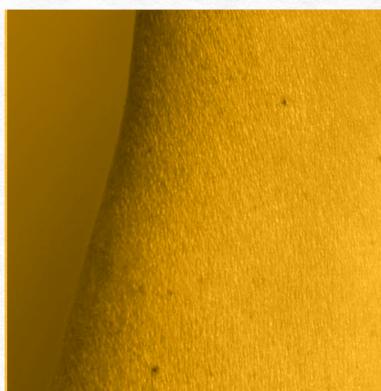
Direttore della Scuola CLASS:  
**Prof. Giovanni Scambia**

Direttore scientifico:  
**Dott.ssa Ida Paris**

CDK4 and CDK6 are cyclin-dependent kinases that control the transition between the G1 and S phases of the cell cycle. CDK4/6 activity is typically deregulated and overactive in cancer cells. There can be amplification or overexpression of the genes encoding cyclins or of the genes encoding the CDKs themselves. Additionally, loss of endogenous INK4 inhibitors, by gene deletion, mutation, or promoter hypermethylation, can also lead to overactivity of CDK4 and CDK6. A major target of CDK4 and CDK6 during cell-cycle progression is the retinoblastoma protein (Rb). When Rb is phosphorylated, its growth-suppressive properties are inactivated. Selective CDK4/6 inhibitors "turn off" these kinases and dephosphorylate Rb, resulting in a block of cell-cycle progression in mid-G1. This causes cell-cycle arrest and prevents the proliferation of cancer cells. Although the initial response to a selective CDK4/6 inhibitor is typically cell-cycle arrest, in some cases arrested cells enter a state of senescence. Understanding the determinants of whether a cell undergoes reversible G1 arrest or enters a senescent state is an important research area. CDK4/6 inhibitors may produce the greatest clinical benefit. To date, estrogen receptor-positive breast cancer is the malignancy for which this class of drugs has proven

most effective and for which we have the most mature data from randomized trials comparing these drugs with endocrine therapy alone. Abemaciclib is peculiar both for the mechanism of inhibition of CDK4 / 6 and because it is the only one of the CDK 4/6 inhibitors to have a continuous administration. CDK 4/6 inhibitors demonstrated an important activity in endocrine-resistant patients thus determining a survival prolongation delaying the time to chemotherapy. These results had never been seen in these problematic setting of patients. Recent data demonstrated an efficacy of CDK 4/6 inhibitors also in high risk early breast cancer with 29% reduction in the risk of developing an IDFS event.

This meeting would like to review the mechanisms of action and efficacy of these drugs in order to evidence the best choice in clinical management of metastatic estrogen receptor-positive breast cancer with special point of view in their future development in every setting.



**WEBINAR  
07 MARZO  
2022**



**FAD ASINCRONA  
ACCREDITATA:  
14 MARZO -  
14 GIUGNO 2022**

## PROGRAMMA

**09.00** Introduzione al corso  
Prof. R. Masetti, Dr.ssa A. Fabi

**Moderatori:**  
Dr.ssa T. Gamucci

**09.30** Stato dell'arte nel trattamento delle neoplasie mammarie metastatiche HR+/HER2-  
Prof. A. Botticelli

**09.50** CDK 4/6 Inhibitors: meccanismo d'azione e interazioni farmacologiche  
Dr. M. Mazzotta

**10.10** Differenze farmacologiche tra inibitori delle CDK4/6: possibile spiegazione delle differenze cliniche  
Dr. C. De Angelis

**10.30** OS: i dati nelle pazienti endocrino-sensibili e nelle endocrino-resistenti  
Prof. P. Vigneri

**10.50** Qualità di vita e inibitori delle CDK4/6  
Dr.ssa L. Moscetti

**11.10** Discussione:  
Dr. G. Colantuoni, Dr.ssa G. D'Auria

**11.30** Coffee break

**Moderatori:**  
Dr.ssa P. Vici, Dr. M. Minelli

**11.45** Trattamento adiuvante delle pazienti con neoplasie HR+/HER2-: le novità che cambiano la pratica clinica  
Prof. D. Generali

**12.10** Inibitori delle cicline e prospettive future  
Dr.ssa I. Paris

**12.30** Tavola Rotonda:  
Algoritmo terapeutico secondo il profilo paziente

1) Recidiva endocrino-resistente bone-only  
Facilitatore: Dr. A. Febraro, Prof. A. Botticelli

2) Recidiva endocrino-sensibile viscerale con comorbidità  
Dr.ssa S. Stani, Prof. P. Vigneri

3) Recidiva endocrino-resistente primaria viscerale  
Dr. A. Orlandi, Dr.ssa P. Fedele

4) In futuro: terapia adiuvante in perimenopausa  
HR+HER2- pT2, pN1 Ki67 20%  
Dr.ssa I. Paris, Prof. D. Generali

**13.30** Conclusione del corso  
Dr.ssa I. Paris

## FACULTY

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**Vici Patrizia** UOSD Sperimentazioni di fase IV, IRCCS Istituto Nazionale Tumori Regina Elena, Roma

## CREDITI ECM

Sono stati attribuiti nr. 4 crediti ECM per le seguenti categorie:

- MEDICO CHIRURGO (Anatomia Patologica; Chirurgia Generale; Ginecologia ed Ostetricia; Oncologia Medica; Radioterapia)
- INFERMIERE

## ISCRIZIONI

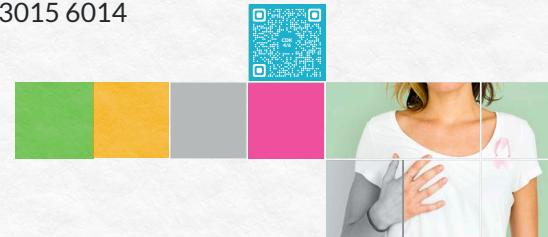
La registrazione al corso può essere effettuata collegandosi on line al sito [www.obegyn.com](http://www.obegyn.com).

## PROVIDER

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Con il contributo non condizionante di:

