


XXXII CONGRESSO NAZIONALE AIRO  
XXXIII CONGRESSO NAZIONALE AIRB  
XII CONGRESSO NAZIONALE AIRO GIOVANI

# AIRO2022

Radioterapia di precisione per un'oncologia innovativa e sostenibile

BOLOGNA, 25-27 NOVEMBRE  
PALAZZO DEI CONGRESSI

 Associazione Italiana  
Radioterapia e Oncologia clinica

 Società Italiana di Radiobiologia

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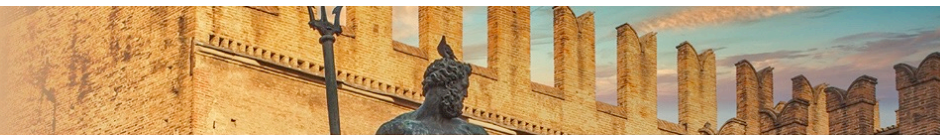
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## Safety of Combination of Abemaciclib and Radiotherapy in metastatic breast cancer patients

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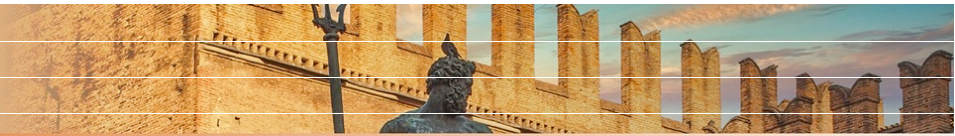
## DICHIARAZIONE

Relatore: Jessica Infante

Come da nuova regolamentazione della Commissione Nazionale per la Formazione Continua del Ministero della Salute, è richiesta la trasparenza delle fonti di finanziamento e dei rapporti con soggetti portatori di interessi commerciali in campo sanitario.

- Posizione di dipendente in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Consulenza ad aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Fondi per la ricerca da aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Partecipazione ad Advisory Board **(NIENTE DA DICHIARARE)**
- Titolarità di brevetti in compartecipazione ad aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Partecipazioni azionarie in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Altro

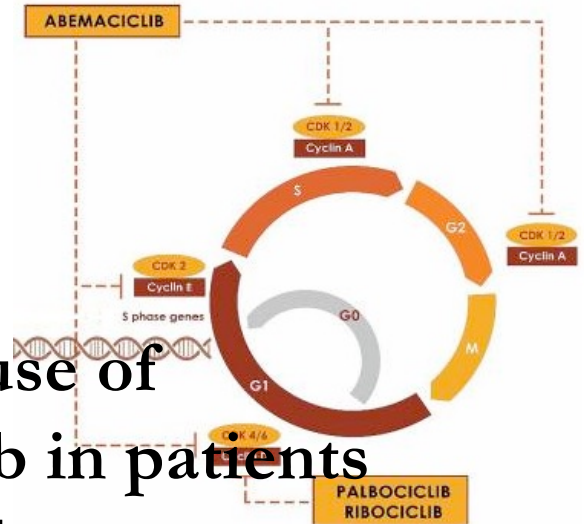




**CDK4/6 inhibitors  
 (Palbociclib, Ribociclib,  
 Abemaciclib) and  
 radiotherapy**

**Aims**

- Increased apoptosis
- Blocked cell cycle progression
- Arrests cell cycle from G1 to S phase
- Inhibition of DNA-damage-repair (DDR) mechanisms



**To evaluate the early toxicity of concurrent use of radiotherapy in association with Abemaciclib in patients with hormone-receptors positive metastatic breast cancer.**

**Abemaciclib**

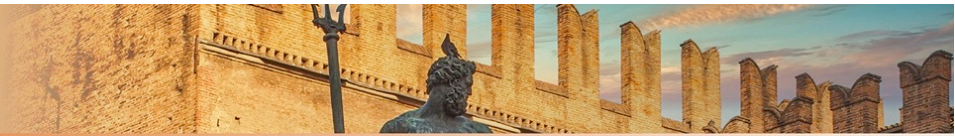
Administration schedule: standard dose of 150 mg twice daily

**Toxicity profile: less severe bone marrow suppression and diarrhea common**

**Role in hormone-resistant disease**



George MA, Qureshi S, Omene C, Toppmeyer DL, Ganesan S. Clinical and Pharmacologic Differences of CDK4/6 Inhibitors in Breast Cancer. Front Oncol. 2021 Jul 12;11:693104. doi: 10.3389/fonc.2021.693104.



## MATERIAL AND METHODS

### Study group

- Patients with metastatic or locally advanced breast cancer
- Hormone receptor (HR) positive, human epidermal growth receptor type 2 (HER2) negative
- Patients treated in our institution from June 2019 to June 2022

### Treatment

Abemaciclib and  
 hormone therapy  
 +  
 radiotherapy

3D-CRT

SBRT

VMAT

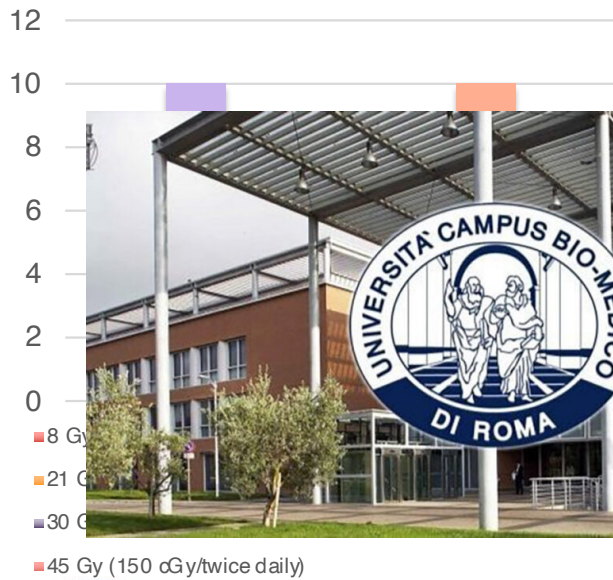
### Endpoints

- Toxicity: NCI-CTCAE V 4.0
- Pain intensity before and after RT treatment: NRS



## Results

### Prescribed Dose



**Concomitant treatment with Abemaciclib appears well tolerated**

- Mean value NRS pre-RT=3.9, SD=3.07
- acceptable toxicity
- mean value NRS after RT=0.9, SD=0.46; p=<0.0001

Type of Adverse Event	Toxicity Grade	During Abemaciclib cycle delivered concurrently with RT		
<b>Hematological</b>				
<b>Neutropenia</b>	Grade 1	0	(0.0%)	
	Grade 2	0	(0.0%)	
	Grade 3	1	(5.3%)	
<b>Anemia</b>	Grade 1	0	(0.0%)	
	Grade 2	0	(0.0%)	
	Grade 3	1	(5.3%)	
<b>Non Hematological</b>				
	<b>Esophagitis</b>	Grade 1	0	(0.0%)
		Grade 2	1	(5.3%)
Grade 3		0	(0.0%)	
<b>Fatigue</b>	Grade 4	0	(0.0%)	
	Grade 1	1	(5.3%)	
<b>Skin toxicity</b>	Grade ≥2	0	(0.0%)	
	Grade 1	0	(0.0%)	
	Grade 2	1	(5.3%)	
<b>Diarrhoea</b>	Grade 3	1	(5.3%)	
	Grade 4	0	(0.0%)	
	Grade 1	0	(0.0%)	
	Grade 2	0	(0.0%)	
	Grade 3	0	(0.0%)	
	Grade 4	0	(0.0%)	

