
XXXIII CONGRESSO NAZIONALE AIRO
AIRO2023
BOLOGNA,
27-29 OTTOBRE 2023
PALAZZO DEI CONGRESSI
Radioterapia Oncologica: l'evoluzione al servizio dei pazienti
Associazione Italiana
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Modello GARD per la de-intensificazione della radioterapia nei tumori HPV correlati: risultati preliminari

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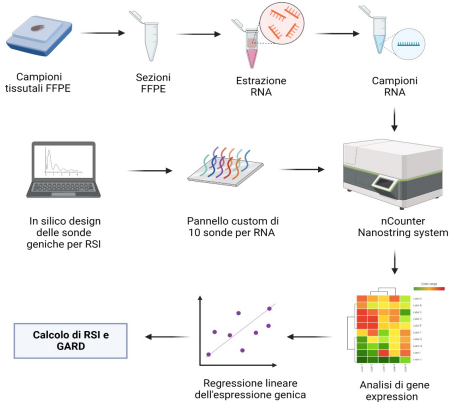
To assess the validity of a **genome-based model for adjusting RT dose (GARD)** in HPV tumors; 13 Oropharyngeal cancers (OPC), 12 cervical cancers (CC) and 15 anal cancers (AC). We performed a pilot retrospective study on 40 tumor specimens from patients affected by HPV tumors and treated with curative RT.



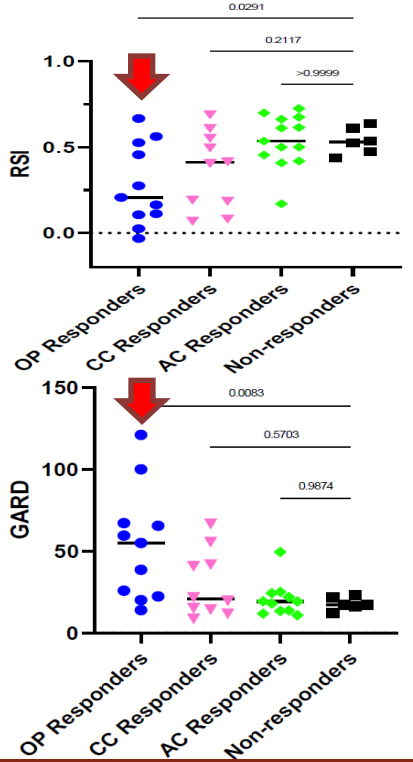
OPC, CC and AC cases were grouped as responders and non responders and checked if **RSI** was predictive of RT response in these tumors. Then, RSI **(Radiosensitivity Index)** and **GARD** were calculated.

At 6 months a total of 34 cases had complete response (responders) and 6 had partial response or progressive disease (non-responders).

➢**RSI<0,49 predicts radiosensitivity**
➢**RSI>0,49 predicts radioresistance**

➢**High GARD** → RT dose can be lowered while still obtaining an oncological response
➢**Low GARD** → RT dose used is correct and cannot be reduced

Pazienti HPV-positivi				
Risposta al trattamento	**Orofaringe**	**Cervice**	**Ano**	**Totale**
Risposta completa	11	10	13	34
Risposta parziale	2	1	2	5
Malattia progressiva	-	1	-	1
Totale	13	12	15	40



➢ **OPC responders** present significant lower RSI values compared to non-responders, the RSI allows a priori recognition of which patients are sensitive or resistant to RT. GARD model for OPC could identify which patients may benefit from deintensified RT.

➢ **For CC responders**, the RSI shows only a small reduction trend and GARD values show conflicting data, compared to non-responders. A larger cohort of patients is needed.

➢ **For AC responders**, the RSI and GARD have not shown any difference compared to non-responsive cases. A new model of RSI with different genes analysis could be required.