

XXXIII CONGRESSO NAZIONALE AIRO

AIRO2023

BOLOGNA,
27-29 OTTOBRE 2023

PALAZZO DEI CONGRESSI

Radioterapia Oncologica: l'evoluzione al servizio dei pazienti



Associazione Italiana
Radioterapia e Oncologia clinica

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18F-FDG-PET-based functional response after chemoradiation of cervical cancer: outcome prediction and early detection of oligo-metastatic disease.

**(Risposta funzionale basata su 18F-FDG-PET dopo radio-chemioterapia del cancro della cervice uterina:
predizione dell'outcome e diagnosi precoce della malattia oligo-metastatica.)**

Dr.ssa Ludovica Forlani

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DICHIARAZIONE

Relatore: DR.SSA LUDOVICA FORLANI

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.

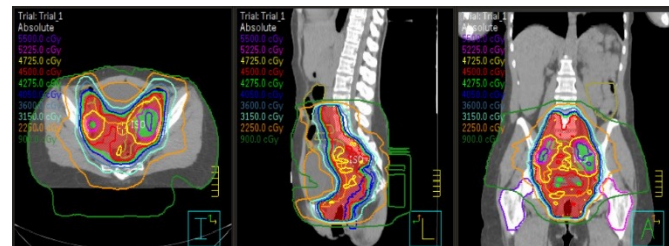
- Posizione di dipendente in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Consulenza ad aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Fondi per la ricerca da aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- 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

LOCAL ADVANCED CERVICAL CANCER EPIDEMIOLOGY AND TREATMENT

Cervical cancer is a major world health problem for women and it is the second most incident cancer after only breast cancer in the female population worldwide.

According to international guidelines, concurrent chemoradiation is widely utilized for cervical cancer as definitive treatment for locally advanced disease.

The standard treatment is weekly cisplatin-based chemotherapy and external beam radiotherapy, followed by brachytherapy boost.



SURVEILLANCE

The frequency of surveillance program is based on the risk of recurrence

ESGO guidelines:

- every 3–4 months for the first 2 years
- every 6–12 months up to 5 years

NCCN guidelines:

- every 3–6 months for the first 2 years
- every 6–12 months for the next 3 years
- annually after 5 years

SURVEILLANCE IMAGING

ESGO guidelines:

- pelvic MRI \pm CT scan or PET-CT not earlier than 3 months after the end of treatment

NCCN guidelines:

- FDG-PET/CT or chest/abdomen/pelvic CT with contrast within 3–6 months of completion of therapy

LOCAL FAILURE AND RECURRENCES AFTER TREATMENT

Pathologic complete response rate after CRT-BRT in 45.7-55%

- Disease recurrence in 26–30.1%
- Local failure in 10-40%

Recurrences: over 80% occur within 2 years:

- OS <12 months
- 5-years OS: 1% in untreated patients

LOCAL FAILURE AND RECURRENCES AFTER TREATMENT

Optimal treatment -> no strong recommendations or evidence

Possible options:

- Surgery -> small lesions, without distant metastasis,
- Adjuvant systemic treatments -> unclear role, often unsuccessful
- Stereotactic body radiotherapy (SBRT)

AIMS

Evaluate if ^{18}F -FDG-PET/CT post CRT-BRT could:

- provide prognostic indications
- allow early detection of patients with oligometastatic disease as potential candidates for SBRT.

METHODS

Retrospective analysis:

- 168 patients
- Staged according to FIGO 2018
- Underwent radical chemoradiation plus brachytherapy boost
- from 2007 to 2021
- ^{18}F -FDG-PET/CT 3-4 months after treatment completion

Survival curves were calculated with the Kaplan-Meier method and compared with the log-rank test.

RESULTS

Five-year overall survival after CRT-BRT first ^{18}F -FDG-PET/CT:

- CR: 89.5%
- PR: 0.0%
- NC/PD: 16.3%

($p < 0.001$)

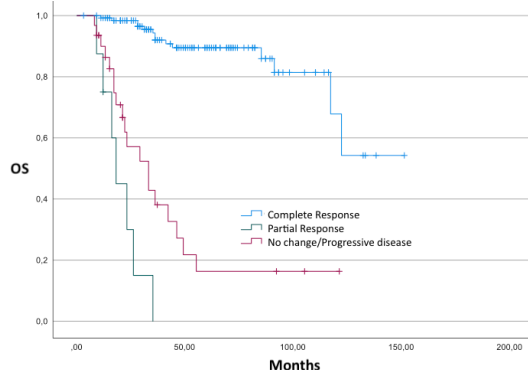


Table 1: impact of functional response on DFS-OS and pattern of failures (numbers and percentages in bold indicate patients potentially eligible for SBRT)

Functional response	No. of patients	5-year DFS (%)	5-year OS (%)	p:
All patients	168	66.0	72.1	
CR	129	84.8	89.5	
PR	8	0.0	0.0	<0.001
NC-PD	31	6.7	16.3	
Distant metastases at first ^{18}F -FDG-PET/CT (only patients with local CR)		No. of patients	%	
All	8		100.0	
Oligo-metastases (< 5)	3		37.5	
Multiple-metastases (> 5)	5		62.5	
Treatment failures during the follow-up (only patients with CR at first ^{18}F -FDG-PET/CT)		No. of patients	%	
All	18		100.0	
Local recurrences +/- metastasis	2		11.1	
Isolated nodal recurrence	5		27.8	
Oligo-metastases (≤ 5)	6		33.3	
Multiple-metastases (> 5)	5		27.8	

Legend: CR: complete response; DFS: disease-free survival; NC: no change; OS: overall survival; PD: progressive disease; PR: partial response.

RESULTS

Five-year disease free survival after CRT-BRT first
 ^{18}F -FDG-PET/CT:

- CR: 84.8%
- PR: 0.0%
- NC/PD: 6.7%

($p < 0.001$)

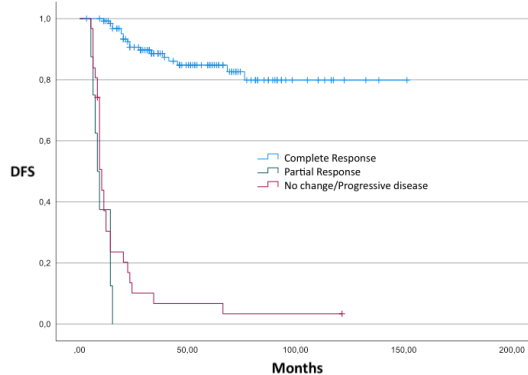


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RESULTS

Patients with local CR but metastases at first ^{18}F -FDG-PET/CT

- 37.5% only oligometastatic disease

Patients with treatment failure at subsequent follow-up evaluations

- 61% with isolated nodal recurrences or distant oligometastases.

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CONCLUSIONS

Utility of ^{18}F -FDG-PET/CT evaluation after CRT/BRT in LACC patients

- I. Provides a reliable prediction of the prognosis
 - II. Identification of non responders patients
 - III. Identification of treatment failures at subsequent follow-up
- } eligible for SBRT

Utility of surveillance after CRT/BRT in LACC patients

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