

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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STRILL: a phase I trial evaluating STereotactic body Radiotherapy (SBRT) dose escalation for relrradiation of inoperable Lung Lesions

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- **STRILL:** a prospective phase I study
- **Aims:** to evaluate the maximum tolerated dose (MTD) of SBRT for thoracic re-irradiation.
- Dose limiting toxicity: **pneumonitis ≥ G3.**

Methods

- Study enrolment of patients candidate to thoracic reirradiation with SBRT: May 2020 - October 2022.
- **3 possible schedules**, with a dose escalation design from 30 Gy in 5 fractions up to 50 Gy in 5 fractions.
- Primary end point: definition of the **maximal tolerated dose (MTD)** of SBRT for thoracic re-irradiation.
- Secondary end points: local control, acute and late toxicities, dose limiting toxicity.

Results

- **15 patients** enrolled with a median age of 72 years.
- No cases of pneumonia ≥ G3 occurred. One patient developed pneumonia G1 6 months after treatment.
- Acute toxicities: dyspnea G1, cardiac failure G3 and chest wall pain.
- Late toxicity: one patient developed an acute coronary syndrome G3.
- Neither acute nor late toxicities ≥ G2 were developed by patients receiving the higher dose scheduled of 50 Gy in 5 fractions.
- **Local response** to SBRT: RP in 7 patients, SD in 7 patient and PD in 1 patient.
- After a median **follow-up of 21 months** 6 patients had a local relapse while 5 patients had a distant relapse.
- At last follow-up, 6 patients died, all but two due to progressive disease.

FEATURES	PATIENTS (N)	PERCENTAGE (%)
SEX		
Male	11	73%
Female	4	27%
PULMONARY COMORBIDITIES		
No	13	87%
BPCO	2	13%
CARDIAC COMORBIDITIES		
No	5	33%
Hypertension	8	53%
Atrial fibrillation	3	20%
Heart failure	1	7%
Acute coronary Syndrome	1	7%
FIRST RT ON TARGET LESION TYPE		
SBRT	12	80%
Hypofractionated RT	2	14%
Conventional RT	1	7%
OVERLAP		
In site	6	40%
50%	9	60%
SBRT TOTAL DOSE IN 5 FRACTIONS		
30 Gy	5	33%
40 Gy	5	33%
50 Gy	5	33%

Conclusions

- SBRT dose escalation for thoracic reirradiation is an effective and well tolerated option for patients with inoperable lung lesions after a first thoracic RT.
- No dose limiting toxicity was seen during the study.