

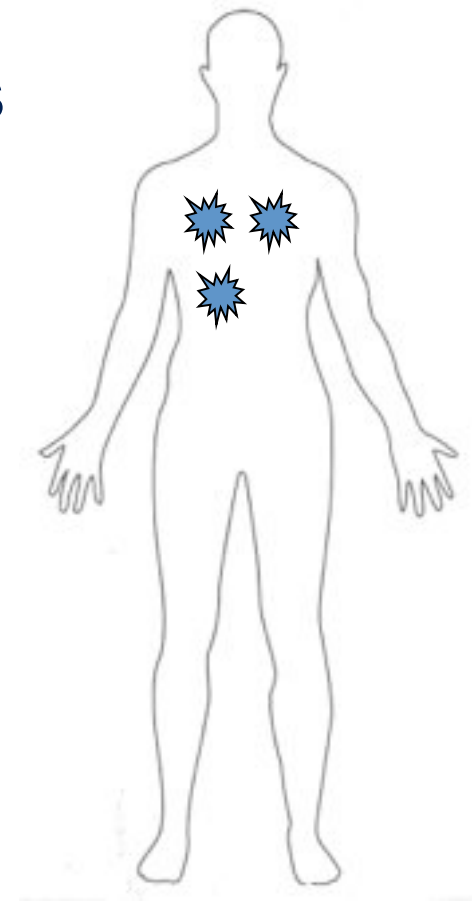


STEREO-ABLATIVE RADIATION THERAPY (SABR) FOR LUNG LESIONS IN OLIGOMETASTATIC PATIENTS

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Background

- Oligometastases refer to metastases that are limited in number and location (one or two organs involved, fewer than 5 lesions) amenable to potentially curable local therapy.
- In oligometastatic patients, local treatments with additional systemic therapy can improve local control and survival.



Background

- Pulmonary parenchymal tissue represents a common site for metastatic seeding in most solid tumors.
- Surgical resection has been for several years the standard choice for patients with oligometastatic lung cancer.
- At present time, SABR represents an alternative therapeutic option with low toxicity profile and high local control rate.

Methods and Materials

Patients' selection

- Patients with 1 to 3 lung metastases
- Maximum tumor diameter smaller than 40 mm
- Locally controlled primary tumor and no other metastatic sites
- Performance status: ECOG 0-1
- No comorbidities controindicating RT
- Adequate pulmonary function

Patients' characteristics:

Enrollement	December '06 – January '13
N° of patients	52
N° of lesions	62
Male:Female	34:18
Age (years) mean (range)	74 yrs (52-87)
Primary tumor Lung Colorectum Breast Other	31 (50%) 19 (30,6%) 6 (9,7%) 6 (9,7%)

Tumor size (<i>longest diameter (mm)</i>) Median (range)	20 (9-38)
Previous chemotherapy Yes No	39 (76%) 13 (23,5%)

RT prescription according to lesions site

- Peripheral: 54 Gy in 3 fractions
- Near chest wall: 60 Gy in 4 fractions
- Central lesions: 60 Gy in 8 fractions

Toxicity and Response evaluation

- CT-scan at 4-6 weeks after RT-end
- CT or PET/CT at 4 months after RT-end
- Further exams every 3 months (CT or PET/TC)

Toxicity was defined according to CTCAE vs. 4.02

Results

Tolerance and Toxicity

Overall treatment was well tolerated

- **No Grade 3-4** toxicity was recorded
- 16 patients (30%) developed a **Grade 1 radiologically** proved pulmonary toxicity, without clinical symptoms
- 2 patient (3,2%) developed **Grade 2** pulmonary toxicity

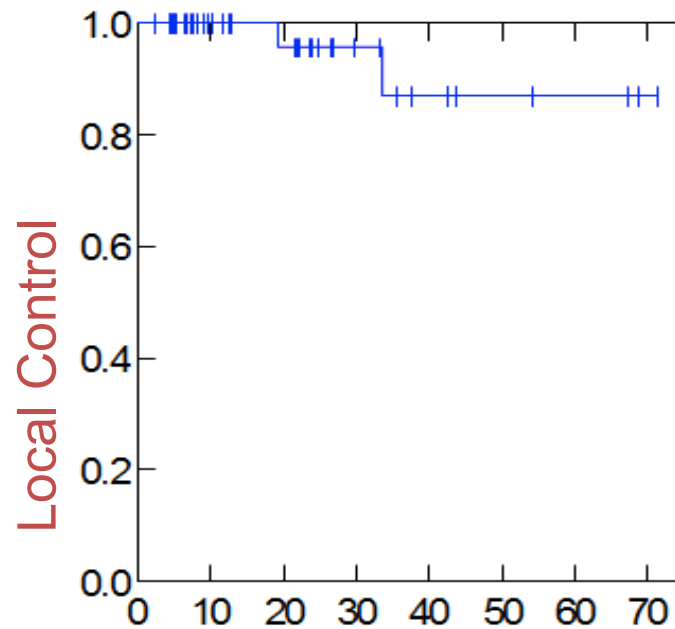
Results

Response*	
CR	37 (60,5%)
PR	14 (21,8%)
SD	9 (14,5%)
PD	2 (3,2%)

← **ORR**
82,3%

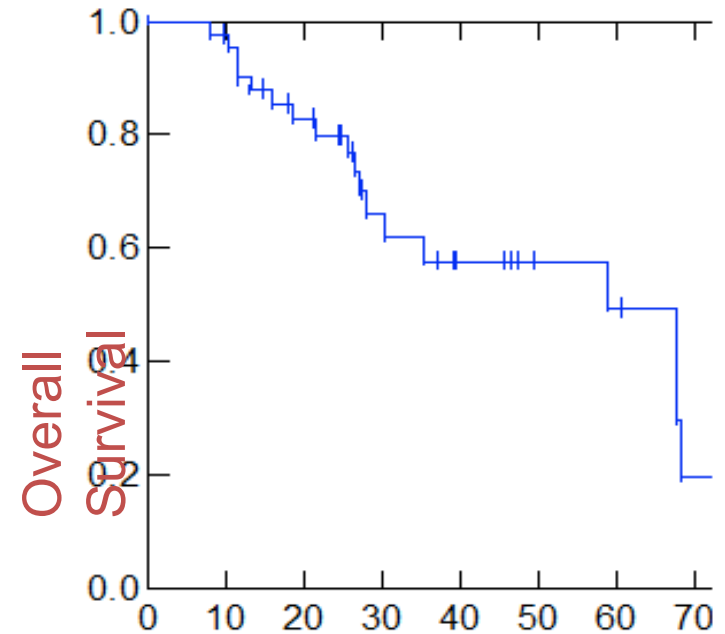
*Local response (**RECIST** Response Evaluation Criteria in Solid Tumor) at median follow up of 45,5 months

Results



Months

LC at 1 yrs 95 % at 3 yrs 87%



Months

OS at 1 yrs 90 % at 2 yrs 77% at 3 yrs 57%

- Median follow-up: 45,5 months (range 8,9-74,6 months)

Patterns of disease progression:

- 36/52 patients (69,2%) had disease progression
- local progression was observed in 2 patients (3,8%)
- distant progression was observed in 34 patients (65,3%)

Pattern	<i>n</i>
- New pulmonary metastases	19
- Regional lymph node metastases	5
- Other sites (liver, brain, bone and adrenal gland metastases)	10

- ***Median Progression Free Survival: 18,6 months***

Conclusions

- SABR in selected oligometastatic patients is effective to improve local control rate and survival, with low rate of treatment-related toxicity.
- Most common pattern of failure was distant (65,3%), despite high local control rate (95% and 87% respectively at 1 and 3 yrs).