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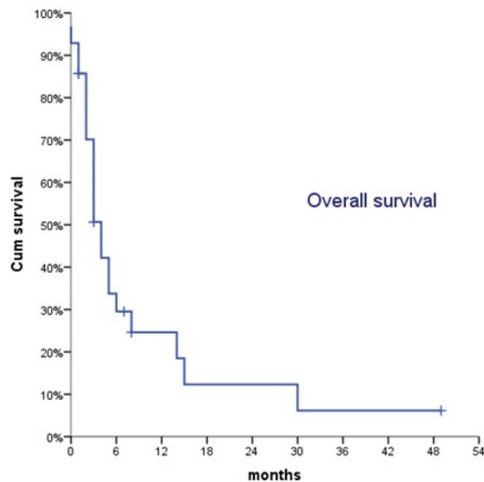


Figure 1. One- and two-years overall survival

	Mean volumes percentage (range)			Dmax (Gy)
	8 Gy	5 Gy	3 Gy	
Bowel	0.37% (0-5)	14.91 (1.9-90)	37.74% (10-98)	7.56 Gy (6.41-8.50)
Bladder	0.99% (0-19.9)	25.27% (0-85.8)	51.40% (15.3-100)	7.10 Gy (5.60-8.60)
Rectum	0.83% (0-17.4)	10.20% (0-67.2)	31.69% (5.5-86.4)	6.49 Gy (3.9-9)
Right kidney	0.42% (0-10)	7.52% (0-81)	25.78% (0-100)	5.69 Gy (0-7.6)
Left kidney	0.57% (0-13)	5.81% (0-75)	27.42% (0-105)	5.07 Gy (0-7.6)
Liver	0%	1.19% (0-6.5)	10.46% (0-50)	5.52 Gy (0-8.36)

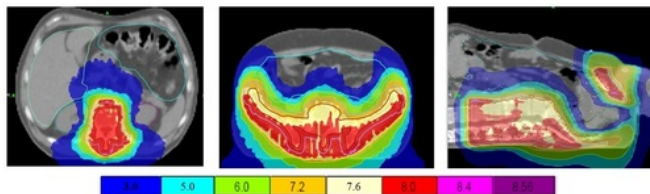


Figure 2. Doses to organs at risk

### Conclusion

LPBI with HT is a promising new high-conformal-technique very effective in the treatment of widespread bone metastases with excellent tolerance rates.

### PO-1450 Clinical Outcome and Radiologic Changes in SARS-CoV-2 Pneumonia treated with Low-Dose Radiotherapy.

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### Purpose or Objective

To assess the clinical, chemical and radiological response in patients receiving LD-Radiotherapy for SARS-CoV-2 pneumonia.

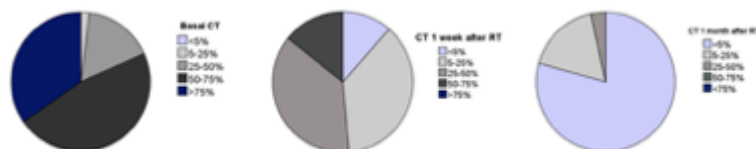
### Materials and Methods

This observational study was conducted between June 2020 and February 2021. Fifty inpatients of our centre were included after accepting the appropriate informed consent form (Tab 1). They had moderate to severe SARS-CoV-2 pneumonia, no clinical response to pharmacological approach and were no candidates for invasive mechanical ventilation. These patients were treated during the acute phase of the viral infection with a single dose of 0.5 Gy to the whole thorax. Clinical follow-up, as well as chemical (CPR, IL-6, Ferritin) and radiological parameters were analysed at 7 days and 1 month after treatment. SAFI was classified in mild, moderate and severe. Radiologically, CT scans were classified according to the degree of parenchymal involvement

Tab 1

Variables	CASE (n = 50)
Age	84.7 (7.8) <sup>†</sup>
Sex	
Female	23 (46) <sup>†</sup>
Male	27 (54)
Neurologic diseases	14 (28) <sup>†</sup>
Cardiovascular diseases	41 (82) <sup>†</sup>
Respiratory diseases	20 (40) <sup>†</sup>
Other comorbidities	46 (88.5) <sup>†</sup>
Days with symptoms	5.10 (1.64) <sup>‡</sup>
Functional status (Barthel Index)	
Independent	9 (18) <sup>†</sup>
Minimally dependent	19 (38)
Partially dependent	12 (24)
Very dependent	7 (14)
Total dependent	3 (6)
Geriatric Depression Scale (GDS)	
No cognitive decline	25 (50) <sup>†</sup>
Very mild cognitive decline	10 (20)
Mild cognitive decline	9 (18)
Moderate cognitive decline	1 (2)
Moderately severe cognitive decline	2 (4)
Severe cognitive decline	3 (6)
Very severe cognitive decline	-
Basal *SaFi	280.86 (93.021) <sup>†</sup>
Mild	29 (58) <sup>†</sup>
Moderate	10 (20)
Severe	11 (22)
*CURB-65 Score	
1 points	-
2 points	13 (26.5) <sup>†</sup>
3 points	26 (53.1)
4 points	10 (20.4)
*First radiological findings	
CT lung involvement <5%	-
CT lung involvement 5-25%	1 (2) <sup>†</sup>
CT lung involvement 26-50%	8 (16)
CT lung involvement 51-75%	23 (46)
CT lung involvement >75%	17 (34)
Final status	
Alive	32 (64) <sup>†</sup>
Exitus due to covid-19	15 (30)
Exitus other causes	3 (6)

Fig1



### Results

50 patients, with a mean age of 84 years-old, were enrolled. Results were obtained from 34 (68%) patients one week after irradiation (11 patients died before the week and 5 of them were in poor condition for further examinations). And 32 (64%) patients reached the month after LD-RT. Three of them decided not to continue with the study, and one only accepted the CT control, so the biochemistry data collected comes from 28 (56%) instead. In all, 18 patients died, 15 due to COVID-19 pneumonia and 3 due to other causes.

Registered basal SAFI was severe on 22% patients, moderate on 20% and mild on 58%. At 24 hours was severe on 21.7%, moderate on 10.9% and mild on 67.4% of patients. One week after, SAFI results were severe on 6.1%, moderate on 3% and mild on 90% patients. In a month, every patient showed mild SAFI, none of them requiring supplemental oxygen therapy. Analytically, a progressive decrease of inflammatory parameters was observed in a month. CRP was observed with a baseline mean of 7.86 mg/dl to 2.88 mg/dl, IL6 went from 67.9 pg/ml to 15.81 pg/ml, Ferritin from 1543 ng/ml to 390 ng/ml at one month of treatment.

Radiologically, 34% of the sample had >75% parenchymal involvement in the CT before RT, 46% had 50-75% involvement, 16% had 25-50% involvement and 2% had 5-25%. One week after treatment, 35 patients undertook a comparative CT scan, 66% of patients showed radiological improvement (no patient had >75% involvement, 10% presented involvement of 50-75%, 26% of 25-50%, 26% of 5-25% and 8% of the sample <5%), only one had a worse radiological situation, and another one the affected parenchymal percentage had not changed. One month after LD-RT, 29 patients had their comparative CT and 2% of patients presented 25-50% parenchyma involvement, 10% showed 5-25% involvement and 46% presented <5% (Fig. 1).

#### Conclusion

Positive clinical response associated with noticeable chemical and radiological results was observed after whole thorax LD-RT in patients with bilateral SARS CoV-2 pneumonia. The observed results encourage the comparison with a control group to determine the clinical benefit of LD-RT

#### PO-1451 Long-term survival after radiotherapy in oligoprogressive patients during checkpoint inhibition

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#### Purpose or Objective

Recent studies described safety and clinical utility of combined anti-programmed cell death protein-1 (anti-PD1) checkpoint inhibition with radiotherapy. However, long-term follow-up data is lacking. Abscopal effects - radiotherapy inducing clinically meaningful distant responses in unirradiated sites - have been hypothesized, though clinical proof is still scarce.

#### Materials and Methods

We retrospectively analysed long-term efficacy and toxicity of combined (stereotactic body) radiotherapy and anti-PD1 in consecutive oligoprogressive stage IV melanoma and non-small cell lung cancer (NSCLC) patients who were irradiated for 1 to 3 progressive metastases during anti-PD1 in our institute between January 2017 and January 2019 and verified one-dimensional RECIST measurements by volumetric assessments.

#### Results

In total 361 stage IV melanoma and NSCLC patients were treated with checkpoint inhibitors in this period. Only 16 of these patients (11 melanoma and 5 NSCLC) were treated with extra-cranial (stereotactic body) radiotherapy for local oligoprogression during checkpoint inhibition and were included in this series. Patient and treatment characteristics are shown in Table 1. Radiotherapy was applied after a median of 11 months (range 1-30 months) from start of anti-PD1 treatment. No increased risk of adverse events for the combined treatments was observed. Sixty-nine percent of patients were alive after a median follow-up of 4.5 years since start of anti-PD1. Seven of 16 patients had stable disease after a median follow-up of 3.5 years after radiotherapy. Abscopal effects were suspected in 3 out of 16 patients. However, if volumetric assessment was used, 2 of these patients already had tumor shrinkage prior to radiotherapy, not detected by one-dimensional measurements.