approach, the prognosis can be favourable. Further research and guidelines are needed to provide a framework for better and safe patient management as these cases are rarely encountered in surgical practice, especially in rural settings.

Written informed consent was obtained from the patient for the publication of this case report and accompanying images.

Author Contributions

Feras Alnimri: Data curation; methodology; writing-original draft. **Michelle W. Ng:** Writing-review & editing. **Prasenjit Modak:** Data curation; supervision; writing-review & editing.

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Pulmonary metastasectomy in colorectal cancer: a nested randomized trial casting doubt on a large survival benefit

Dear Editor,

I write in response to Yaftian *et al*.'s comprehensive account of an 18-year experience of lung metastasectomy in 476 patients with >20 cancer types.[1] They make reference to the PulMiCC trial as 'unsuccessful'. While randomization was challenging – given the pervading climate of certainty – the prospective observational cohort recruited 512 patients.[2] Included were 263 patients selected for lung metastasectomy and 128 rejected. Those selected had the usual favourable features as indicated in Table 1. Their 5-year survival at 47% was more than twice that of those turned down for the operation but given the hazard ratios, that difference in survival could all be attributable to well-informed, evidence-based selection.

Table 1 Favourable factors for survival were better in the metastasectomy group

Patient factors	Hazard ratio	Metastasectomy (%)	No metastasectomy (%)
		n = 263	*n* = 128
ECOG zero†		68	36
Median $\%FEV_1$‡		96	87
Solitary metastasis§	2.04	65	31
CEA <5 ng/mL¶	1.91	31	21
No liver metastases	1.22	36	28
5-year survival		47	22

†ECOG 0–5. Zero is unimpaired.

‡FEV_1 as a percentage of predicted values based on height and sex.

§The hazard ratio is for multiple versus solitary. The median values of the group are given.

¶The tumour marker CEA. All hazard ratios are from the meta-analysis of Gonzalez *et al.* (2013).[5]

CEA, carcinoembryonic antigen; ECOG, Easter Cooperative Oncology Group; FEV_1, forced expiratory volume in the first second.

For the 93 randomized patients, the arms were well balanced for all known confounders. The Kaplan–Meier analysis, kindly republished in your journal in March 2021, showed no difference at any time point.[3] It robustly refutes the assumption that without metastasectomy survival would have been zero and greatly narrows the believed margin of benefit of ~45%. Clarity on those two prior unknowns from PulMiCC is a measure of its success.

There is no biological or statistical basis for a special state of oligometastasis,[4] so I like the new definition – metastasis to a single organ. It is operationally more useful for surgeons than ≤5 metastases which has been arbitrarily adopted by radiation oncologists as the 'few enough to zap' criterion. As Phillip Antippa asked in the headline of his editorial on pulmonary metastasectomy for oligometastatic colorectal cancer 'is the sun setting for surgeons?'. The literature begins to suggests that treatment of lung metastases will go to stereotactic radiotherapy. As Gavin Wright reminded the audience at the International Association for the study of Lung Cancer conference in Barcelona in November 2019, the oligometastatic state was something 'two blokes in a pub' came up with. They were radiation oncologists.

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