Abstract citation ID: znac404.102

HPB P05 Loco-regional Treatment of Metachronous Oligometastases in Pancreatic Adenocarcinoma; A systematic Review

Katie Boag1, Emily Britton2, Stephen Knight3, Peter Coe1, Benjamin Chan4,5, Natalie Blencowe6,2, Samir Pathak1
1Leeds Teaching Hospitals Trust, Leeds, United Kingdom
2University Hospitals Bristol NHS Foundation trust, Bristol, United Kingdom
3Centre for Medical Informatics, University of Edinburgh, Edinburgh, United Kingdom
4Department of Pharmacology & Therapeutics, University of Liverpool, Liverpool, United Kingdom
5Liverpool University Hospitals NHS trust, Liverpool, United Kingdom
6University of Bristol, Bristol, United Kingdom

Background: Pancreatic ductal adenocarcinoma (PDAC) is the twelfth commonest cancer worldwide, and predicted to be the second most common cause of cancer death by 2030. Outcomes are poor, just 20% of patients present with resectable disease of which up to 85% recur post-surgery. Loco-regional treatment of limited metastatic recurrence, termed metachronous oligometastases (a transitional state between localised and widespread systemic disease) may confer a survival benefit. In 2020 the European Organisation for Research and Treatment of Cancer recommended definitions for characterisation and classification of oligometastatic disease using consensus methods. However, there remains no universally agreed definition of this disease state, which may contribute to heterogeneous outcome reporting and limit comparison between studies.

The aim of this systematic review is to i) summarise the published loco-regional treatments of metachronous oligometastatic PDAC and ii) identify reported definitions of the oligometastatic state.

Methods: All articles reporting management and outcomes for patients with metachronous oligometastatic PDAC cancer were eligible for inclusion. Searches for ‘pancreatic cancer’ and ‘oligometastatic disease’ were undertaken via Medline, Embase, PubMed, Web of Science, the Cochrane Central Register of Controlled Trials and Google Scholar. Bibliographies of relevant studies were used to identify additional studies. Screening was performed independently by at least two authors. Articles produced in languages other than English, abstracts and conference proceedings, case reports, reports of fewer than five patients, and articles published before 2000 were excluded. The full-text versions of articles were accessed for further assessment. Data extraction was undertaken independently by at least two authors using a standardised proforma including general demographics, treatment of primary, recorded definitions of oligometastatic disease, methods of treatment for liver oligometastatic disease, local recurrence, other sites of recurrence, and survival outcomes.

Results: 6602 articles were identified for title screening, 284 for full-text review and 35 articles were included, of which 29 were case series and six were non-randomised comparative studies. Of these, 29 (83%) were retrospective. Five (14%) were multicentre, and participant numbers ranged from 10 to 332.

Descriptions of oligometastatic disease were variable, with no study using the same definition. No studies reported an oligometastatic subtype as described by the European Organisation for Research and Treatment of Cancer consensus recommendation. Liver oligometastases were reported in 15 studies and demonstrated variable treatments including radiofrequency (4), stereotactic body radiotherapy (SBRT) (2), and selective internal radiation therapy (SIRT) (2). Nine studies reported surgical management of liver metastasis. The Median overall survival (OS) for these treatments was 29.5, 28.9, 27.5, and 39.5 months respectively.

Management of local recurrence was reported in 22 studies and included SBRT (9), trans-arterial chemoembolisation (4) radiofrequency (1), and surgical resection (8). Median OS were 28.1, 29.9, 79.3 and 49.3 respectively. Three studies reported on the treatment of peritoneal oligometastases, including SIRT (1) and surgical resection (2) with Median OS as 12.3 and 61 months respectively.

Conclusions: The majority of studies were single-centre, non-randomised retrospective, without comparators and with low patient numbers. Treatments offered for local and distant recurrence were heterogeneous. There was no consensus for the definition of oligometastatic disease, which resulted in a lack of consistent patient selection. There is an urgent need for future studies to use a consistent definition to allow for a more homogenous patient selection and allow meaningful comparison of treatment delivery and outcomes.