Pancreatic Cancer UK

Promoting Innovative Practice

Development of dedicated pancreatic cancer clinics[1]

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At a glance

Background: The majority of people with pancreatic cancer are diagnosed too late for potentially curative surgery. Chemotherapy Gemcitabine (alone or in combination) and FOLFIRINOX are commonly used to treat advanced pancreatic cancer when surgery is not an option. Despite the progress in chemotherapy drugs seen in the last 20 years, survival still remains poor. It is therefore critical to implement a model of treatment to improve disease outcomes for those diagnosed with inoperable pancreatic cancer.

Implementation of a model of dedicated clinics for pancreatic cancer: This showcase presents a retrospective study led by Dr Faluyi and Dr Palmer and their team in Clatterbridge Cancer Centre in Merseyside. The aim of the study was to compare disease outcomes of individuals with inoperable pancreatic cancer who received care in dedicated pancreatic cancer clinics and those that received care in general oncology clinics.

Outcomes: Treatment in dedicated clinics was associated with initiation of chemotherapy 10 days earlier than in general oncology clinics. About 25% more patients received chemotherapy in pancreatic cancer dedicated clinics compared to general oncology care clinics. Median survival for all advanced pancreatic cancer patients was five months in dedicated clinics compared to three months in general oncology clinics. For metastatic disease, median survival was 4 months in the dedicated clinics that was higher by 1 month compared to general oncology clinics. Survival of people with lower performance status was improved when care was delivered in pancreatic cancer clinics; median survival was 1 month longer and one-year survival was 13% for low performance status individuals, whilst no one survived one year in the group of individuals seen in the general oncology.

Conclusions: Pancreatic cancer dedicated clinics for people with advanced disease were associated with better outcomes especially for those with metastatic cancer and those with low fitness. Dedicated pancreatic cancer clinics can provide faster and better treatment options that can improve quality of life, patient experience and survival.

Quick Facts

A study by the Cancer Survival Group led by Professor Michel Coleman in the London School of Hygiene and Tropical Medicine (LSHTM) showed that in England:

- From 24,381 individuals diagnosed with pancreatic cancer in 2010-2013, only 2,118 had potentially curative surgery; i.e 8.7% of the total cases
- The five-year survival of people with pancreatic cancer who did not receive surgery was 1.7% (unpublished data).

Background

The majority of people diagnosed with pancreatic cancer in England cannot have potentially curative surgery[2].The vast majority of people with pancreatic cancer are diagnosed with locally advanced or metastatic disease[2]. People with inoperable pancreatic cancer will receive chemotherapy if they are treated at all. Radiotherapy is also sometimes given to manage pain and prevent pathological fractures[2]. Gemcitabine (Gem) chemotherapy for inoperable pancreatic cancer has shown modest median survival benefits (5.65 vs 4.41 months) and improved quality of life (23.8% vs 4.8% improvement)[3]. Longer median survival (up to 11.2 months) has been demonstrated in more recent trials using combination chemotherapy (Gemcitabine plus a targeted agent)[4]. FOLFIRINOX has been shown to have a survival advantage over Gemcitabine (11.2 vs 6.8 months)[5] and it is widely used in clinical settings[6,7].

In a recent meta-analysis study, individuals with inoperable disease had a 24.2 months overall survival; longer than that reported with Gemcitabine (6-13 months)[8]. Nevertheless, a systematic study in Wales in a cohort of patients with locally advanced and metastatic pancreatic cancer in the period 2002-2005 reported median survival of 7.4 and 2.8 months, respectively[9]. Moreover, a recent study in pancreatic cancer outcomes in Germany and the United States reported little improvement in overall survival of inoperable pancreatic cancer, i.e. from 4.8% to 5.7% in periods 2000/02 and 2010/12, respectively[10], suggesting that outcomes achieved in trials described above are not replicated in real life.

Case for change

Advanced pancreatic cancer is associated with increased morbidity and poor prognosis. The alarming statistics demonstrate a need to develop non-surgical treatment routes for people with inoperable pancreatic cancer to drive improvements in disease outcomes. Centralised care with the introduction of specialist Hepato-Pancreatic Biliary (HPB) centres has proven a key development for the improvement of surgery outcomes for individuals diagnosed with early stage pancreatic cancer. High-volume specialist centres are associated with reduced post-surgery mortality and better median survival[11,12]. Increased surgeon specialisation and supportive care are considered important factors that contribute to the better management of patients who have surgery. Therefore, it is plausible to hypothesise that dedicated pancreatic cancer clinics offer better care and faster access to treatments, resulting in better outcomes for the people with inoperable pancreatic cancer. This report presents a systematic study led by Dr Faluyi, Consultant in Medical Oncology and Dr Palmer, Chair in Medical Oncology in Clatterbridge Cancer Centre (CCC) in Merseyside and the University of Liverpool[1].

The study demonstrated that in dedicated clinics

a) treatment started faster (within 18 days as opposed to 28 days),

b) around 25% more patients had chemotherapy (67% vs 43%) and

c) patients had improved median survival, 5 months as opposed to three months

Our Policy calls

We call on the governments and NHS across the UK to roll out nationwide pancreatic cancer dedicated clinics for people with pancreatic cancer who cannot have surgery.

We believe that such clinics will enable access to treatment, within 20 days, giving people with inoperable pancreatic cancer the option to access more and better treatments and live longer.

Development of non-surgical dedicated pancreatic cancer clinics

The team in the Cancer Clatterbridge Centre (CCC) in Merseyside carried out a study to investigate whether outcomes for people with inoperable disease are improved after establishment of dedicated pancreatic cancer clinics compared to general oncology clinics. They measured

i) waiting time from diagnosis to initiation of treatment

ii) access to chemotherapy and

iii) survival outcomes.

The model of care practice

1	Transition from general to dedicated clinics for individuals with advanced pancreatic cancer took place between 1st of October 2009 and 31st of December 2010
2	A prospective database with clinical records was generated by statisticians of the Clinical Effectiveness Team (CET) in CCC
3	Ethical approval was obtained to review the database and access clinical data
4	Individuals who were diagnosed early enough to have potentially curative surgery were excluded from the database
5	The study group comprised of people with advanced stage pancreatic cancer and were grouped as follows: i) General care group. Patients who were managed as part of the general oncology clinics, between 1st October 2009 and 31st December 2010 (n=121 patients treated in general oncology care) ii) Dedicated care group. Patients who were managed in dedicated pancreatic cancer clinics, between 1st January 2013 and 31st March 2014 (n=115 patients treated in dedicated care)
6	General oncology care group was managed by five different oncologists in any of five clinics distributed throughout the Merseyside and Cheshire region which treated mostly patients with any cancer type Dedicated care group was managed by two oncologists in two dedicated clinics specialised in pancreatic cancer
7	Routes for referral to dietitians, palliative care and other pancreatic cancer medical specialists were available to both groups with more direct referral routes for the dedicated care group

The model of care practice (continued)

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Data was recorded as follows:

i) Diagnosis was recorded in the CET database and cross-checked with pathology results

ii) Cancer stage was monitored by radiology reports, which were updated by pancreatic cancer multi-disciplinary team (MDT) reviews

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Survival analysis was measured as per status of patients on the 30th of September 2015, permitting sufficient follow-up to calculate median and one-year survival for all patients and ensure enough cases in both general and dedicated care to compare survival between the two groups. Overall survival was taken as the interval between first visit to a clinic and the date of death

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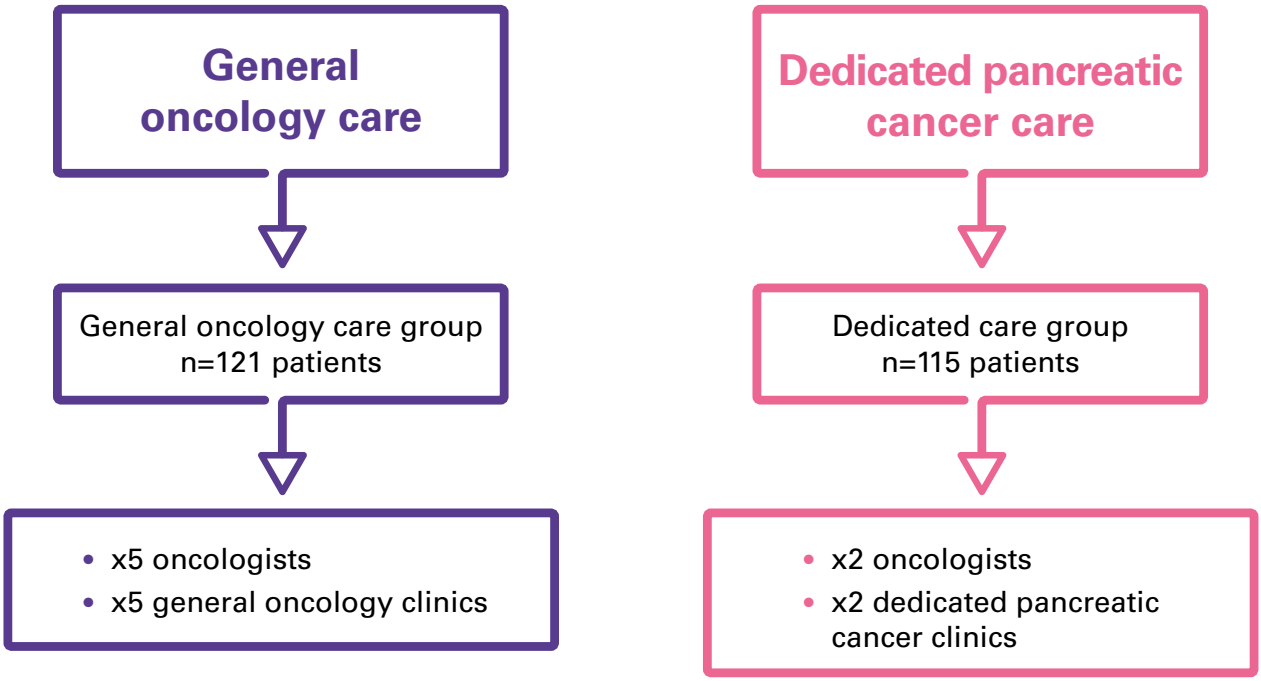
Statistical analysis was performed by CET statisticians who managed the CCC database and all cofounding factors (e.g. demographics, smoking, comorbidities) were taken into account

This is a schematic summary showing differences between a general and dedicated care setting for people diagnosed with advanced pancreatic cancer



Timeline

General oncology care group. Individuals managed in general oncology care clinics:

1st October 2009

and

31st December 2010

Dedicated pancreatic cancer care group. Individuals managed in dedicated for pancreatic cancer clinics:

1st January 2013

and

31st March 2014

Survival analysis was measured as per status of affected individuals on the

30th of September 2015

Outcomes

Treatment characteristics of patients

In the dedicated care group, 67% (77 out of 115) patients received chemotherapy as opposed to 43% (52 out of 121) in the general care group (Figure 1).

Distribution of chemotherapy treatment among patients (%)

Figure 1: Chemotherapy treatment in dedicated pancreatic cancer and general oncology care patient groups. Data is expressed as % proportion of individuals who received chemotherapy in general oncology (purple bar) and dedicated pancreatic cancer (pink bar) clinics.

Treatment times

The time to initiation of chemotherapy after initial review of diagnostic test that shows pancreatic cancer diagnosis was on average 10 days less in the dedicated care group (Figure 2). Treatment was initiated within 18 days on average for dedicated care group and 28 days on average for general oncology group.

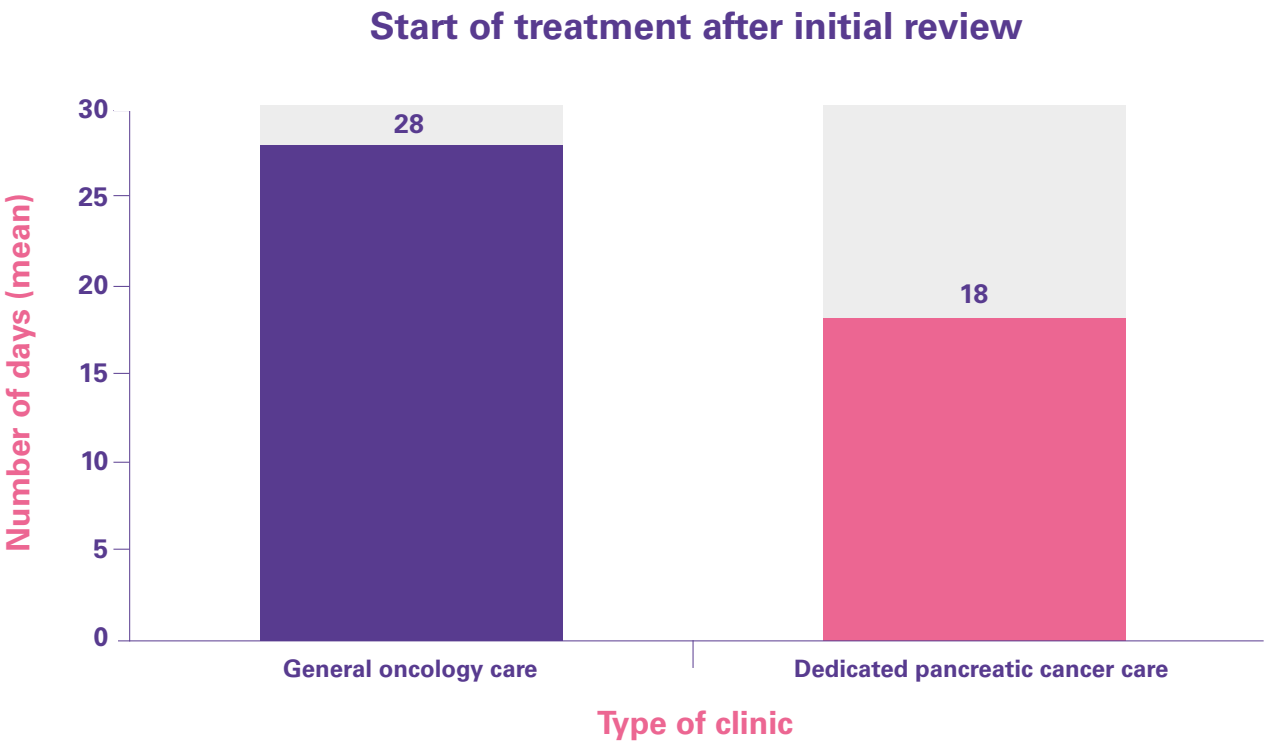


Figure 2: Average number of days of initiation of treatment from the time that patients were first reviewed. Data is expressed as mean number of days between individuals who were managed in general oncology care (left panel) and individuals who were managed in dedicated pancreatic cancer care clinics (right panel).

Survival

Survival by clinical evaluation

Overall, median survival for people with locally advanced pancreatic cancer was improved (7 months) compared to the survival of patients with metastatic disease (3 months). Survival was lower by 4 months, regardless of the care setting they were in (Figure 3A). However, overall median survival for patients with advanced pancreatic cancer who were managed in dedicated care clinics was 5 months compared to 3 months for patients seen in general oncology care clinics. This was mainly attributed to higher survival of metastatic patients in the dedicated care group, as there was no difference in survival of locally advanced pancreatic cancer patients between the two different types of care (data not shown). Precisely, dedicated care group of patients with metastatic cancer had a median survival of 4 months as opposed to patients in the general oncology care group that survived 3 months (Figure 3B).

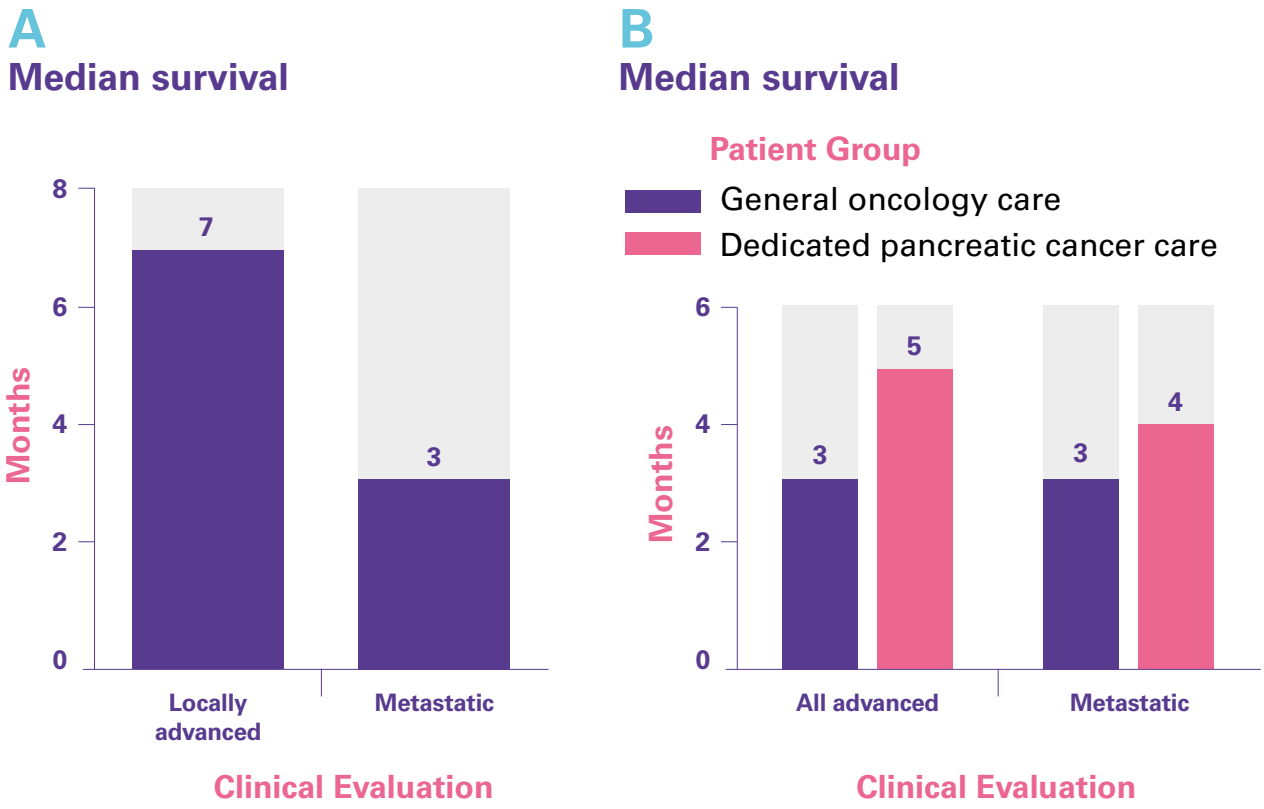


Figure 3: Median survival by clinical evaluation.
A) Median survival (months) between locally advanced and metastatic pancreatic cancer. B) Median survival of all advanced and metastatic pancreatic cancer between general oncology and dedicated pancreatic cancer care.

Survival by performance status

No difference was observed in survival of patients who had a high fitness status between the two types of care (data not shown). In contrast, among people who had a lower fitness status, those in the dedicated pancreatic cancer care group (n=30) had a median survival of 4 months (Figure 4, right pink bar) with 13% surviving beyond one year (Figure 4, right yellow triangle). In contrast, those in general oncology care group (n=40) had a median survival of 3 months (Figure 4, left purple bar) with no one surviving a year. (Figure 4, left yellow triangle) (Figure 4).

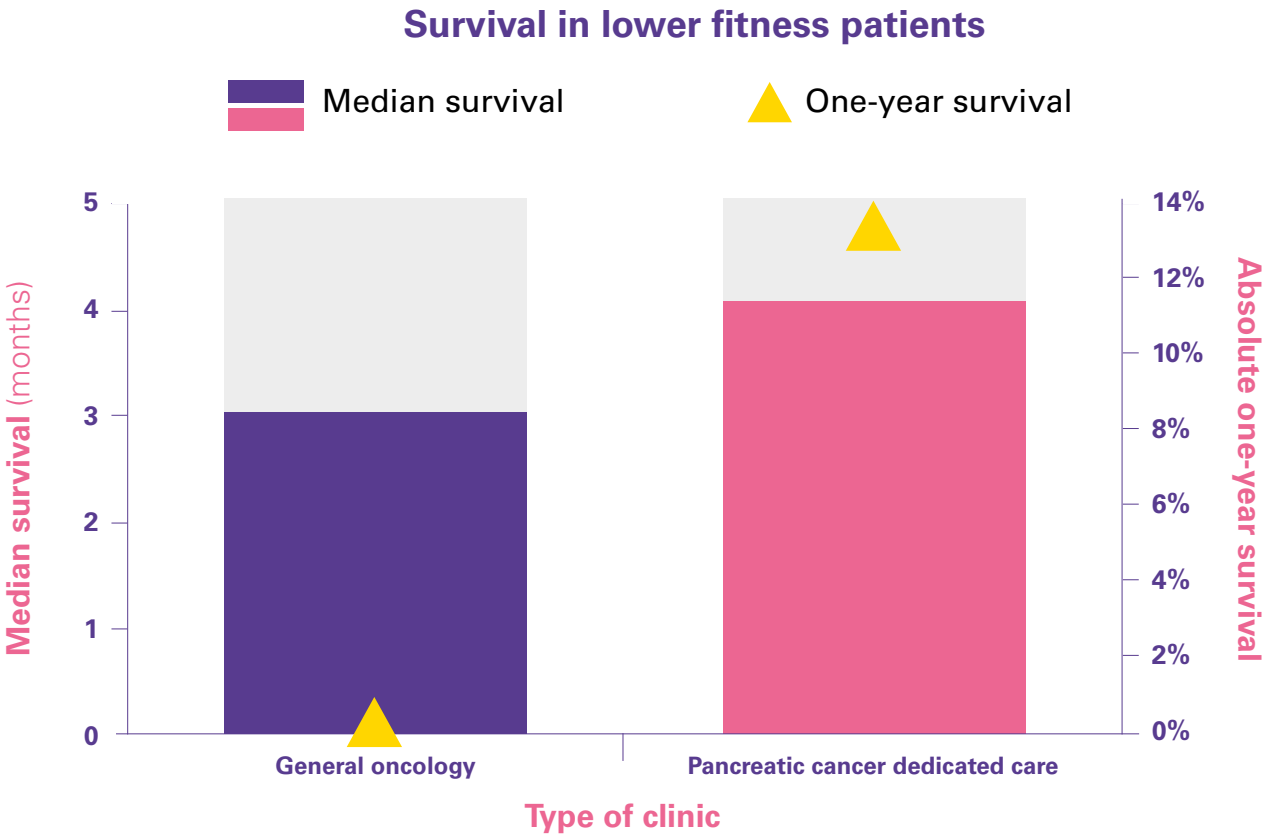
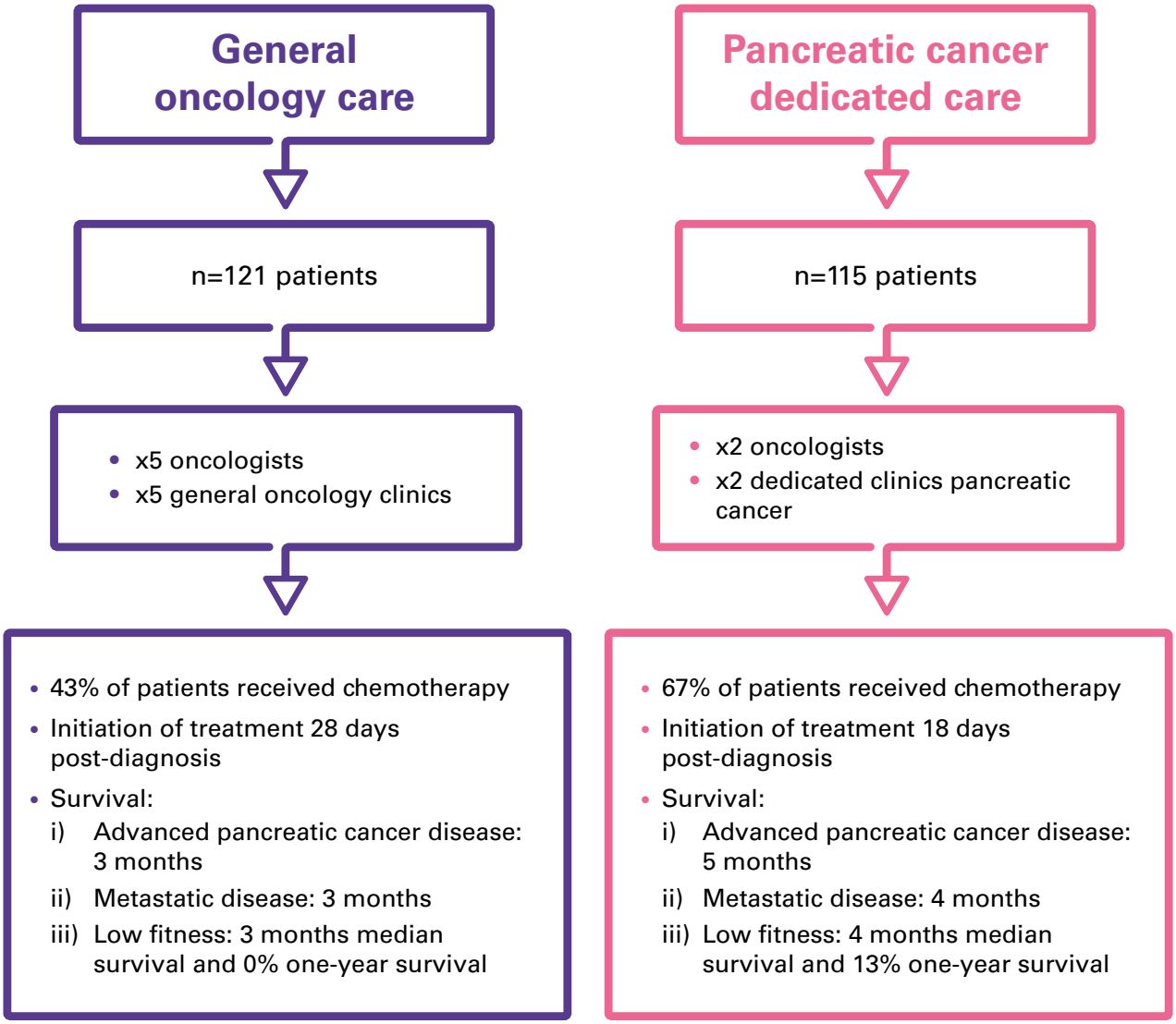


Figure 4: Median and one-year survival of lower fitness individuals.
Data is expressed as median (column bars; left y axis) and absolute one-year (triangles; right y axis) survival.

Conclusions

The current study shows improved disease outcomes for individuals with inoperable disease who were treated in dedicated pancreatic cancer clinics. From the current data, it is unclear whether the survival benefit of those seen in dedicated care clinics has been impacted by the use of FOLFIRINOX as this drug was not available in 2009-2010 when outcomes for patients seen in general oncology care clinics were treated. However, the results presented in this report demonstrate that other factors are linked to better outcomes of dedicated care clinics. Firstly, individuals seen in dedicated pancreatic cancer clinics started treatment 10 days earlier than those seen in general oncology care clinics. Second, around 25% more patients received chemotherapy in general oncology care (67% as opposed to 43% in general oncology care). This has been associated with better survival outcomes, especially for those with metastatic disease and low fitness status. Notably, for patients with lower fitness status, the one-year survival was 13% for those who received dedicated care, whereas no one with lower fitness who received general care survived one year. Differences in care outcomes between pancreatic cancer and general oncology clinics clinics are summarised in the diagram below.

Key care outcomes in General oncology and dedicated pancreatic cancer care clinics



Recommendations and future directions

Dedicated oncology clinics for advanced pancreatic cancer when surgery is not an option should be considered for faster treatment initiation and access to better supportive care. Introducing dedicated pancreatic cancer clinics for people diagnosed with inoperable disease could improve quality of life and early supportive care for the better management of symptoms such as weight loss, malnutrition and pain. Expanding the capacity and infrastructure to manage patients with inoperable pancreatic cancer in dedicated clinics might open new avenues in non-surgical cancer care and treatments that could improve patient and disease outcomes. Future evaluative studies to measure the impact on quality of life in patients from these two models of care will establish any further benefits that specialised pancreatic cancer care may have.

Our Policy calls

We call on the governments and NHS across the UK to roll out nationwide dedicated pancreatic cancer clinics for people who are diagnosed later and for whom potentially curative surgery is not an option.

We believe that such clinics will enable patients to access treatment faster, in less than 20 days from diagnosis. This will give them the option to access more and better treatments and give them the chance to spend more time with their loved ones.

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This case study contains up-to-date information as per November 2018. It will be reviewed in March 2020.

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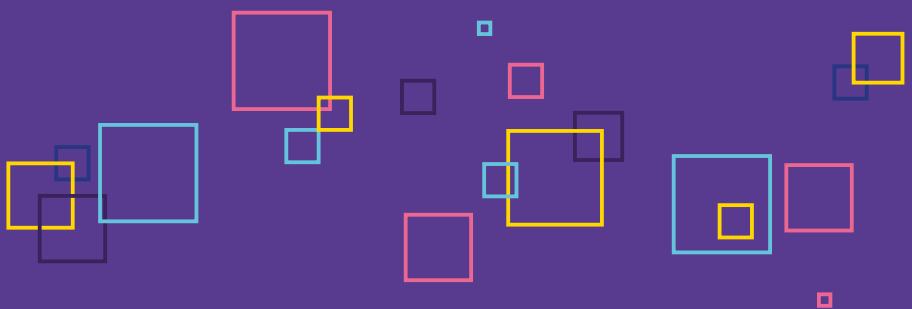

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