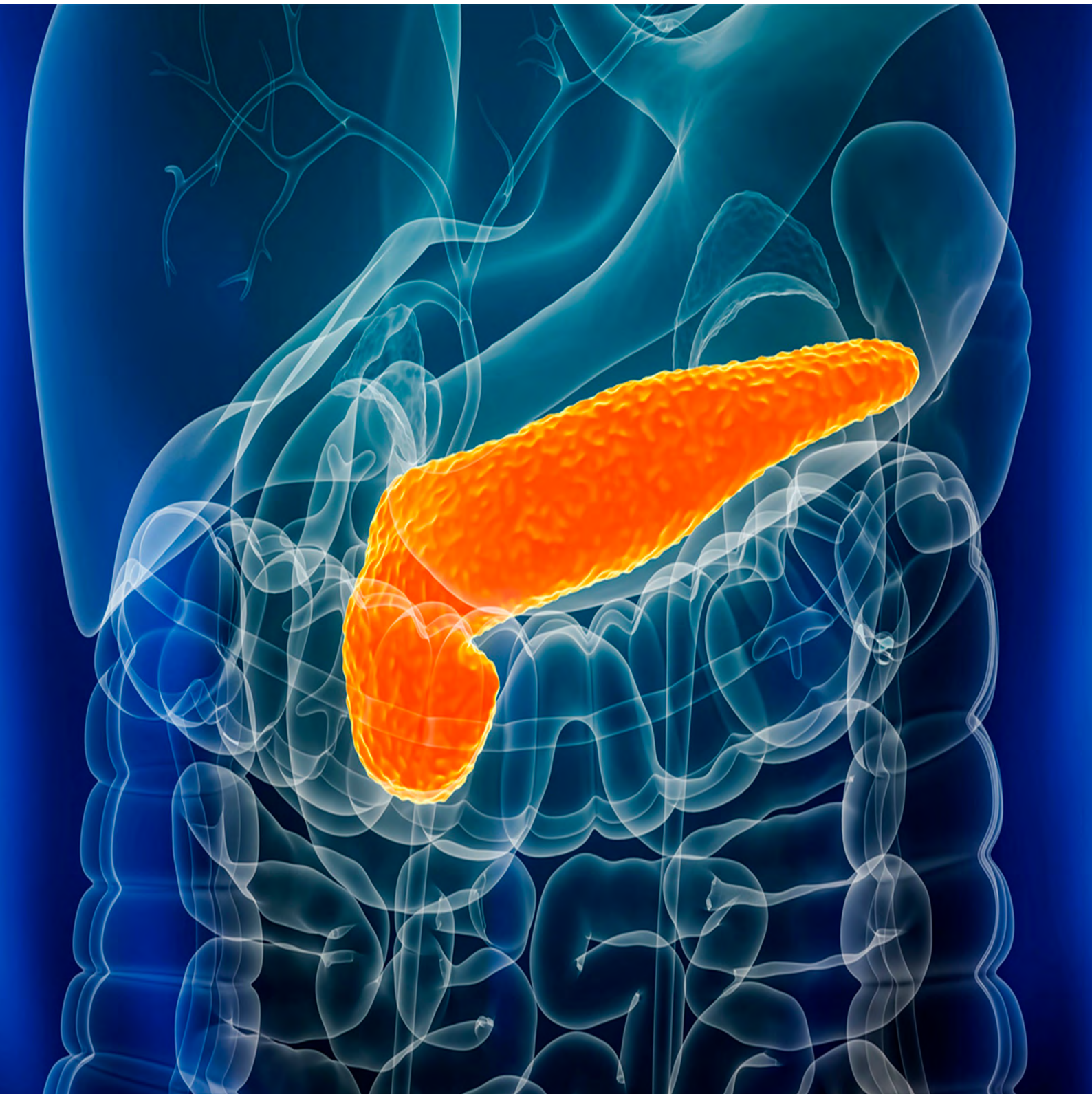
NPaCA
National Pancreatic Cancer Audit

NATCAN
National Cancer Audit Collaborating Centre

National Pancreatic Cancer Audit State of the Nation Report 2025

An audit of care received by people diagnosed with pancreatic cancer between 1 January 2021 to 31 December 2022 in England and 1 January 2022 and 31 December 2023 in Wales.

Published September 2025



NPaCA

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Royal College of Surgeons of England
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HQIP
Healthcare Quality Improvement Partnership

The National Cancer Audit Collaborating Centre (NATCAN) is commissioned by the Healthcare Quality Improvement Partnership (HQIP) and funded by NHS England and Welsh Government as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). NATCAN delivers national audits in bowel, breast (primary and metastatic), kidney, lung, non-Hodgkin lymphoma, oesophago-gastric, ovarian, pancreatic and prostate cancers.

AUGIS
ASSOCIATION OF UPPER GASTROINTESTINAL SURGERY OF GREAT BRITAIN AND IRELAND

Association of Upper Gastrointestinal Surgery of Great Britain and Ireland is the speciality society that represents upper gastrointestinal surgeons. It is one of the key partners leading the Audit. Registered Charity no: 1093090

bsg BRITISH SOCIETY OF GASTROENTEROLOGY

British Society of Gastroenterology is the speciality society of gastroenterologists. It is one of the key partners leading the Audit. Registered Charity no: 1149074

The Royal College of Radiologists

The Royal College of Radiologists is the professional body for clinical radiologists and clinical oncologists. It is one of the key partners leading the Audit. Registered Charity no: 211540

NDRS
NATIONAL DISEASE REGISTRATION SERVICE

This work uses data that has been provided by patients and collected by the NHS as part of their care and support. For patients diagnosed in England, the data is collated, maintained and quality assured by the National Disease Registration Service (NDRS), which is part of NHS England. Access to the data was facilitated by the NHS England Data Access Request Service.

GIG CYMRU NHS WALES
Rhwydwaith Canser Cymru
Wales Cancer Network

NHS Wales is implementing a new cancer informatics system. As a result, the quality and completeness of data from Wales is likely to have been impacted due to implementation of this new system across multiple NHS organisations (health boards), which has resulted in data being supplied by both old and new systems. Additionally, and reflecting the uncertainty of data quality, the data submitted to the audit may not have undergone routine clinical validation prior to submission to the Wales Cancer Network (WCN), Public Health Wales.

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1. Introduction

The National Pancreatic Cancer Audit (NPaCA) is one of ten national cancer audits within the National Cancer Audit Collaborating Centre (NATCAN), which is commissioned by the Healthcare Quality Improvement Partnership (HQIP) on behalf of NHS England and the Welsh Government. The aim of NATCAN is to provide regular information on patterns and variation in delivery of cancer care from diagnosis to treatment, using this information to improve access to treatment and facilitate quality improvement initiatives, with a view to optimising outcomes nationally.

The National Pancreatic Cancer Audit (NPaCA) evaluates patterns of care and outcomes for people diagnosed with pancreatic cancer in England and Wales. It aims to highlight variations in care and to support NHS services to identify and address areas for improvement.

This is the second State of the Nation report from the Audit. It presents information on the care received by adults diagnosed with exocrine pancreatic cancer during overlapping two-year periods in England (2021-2022) and Wales (2022-2023). We also describe the care received by people diagnosed with extrahepatic bile duct and ampullary tumours during the same periods; this group is reported separately to highlight differences in the care pathways and outcomes compared to those with exocrine pancreatic cancer. We report on people diagnosed over two calendar years to ensure sufficient patient numbers to enable reporting of indicators at organisation level; similarly, indicators on surgical outcomes are reported for a three-year period for England (2020-2022) to ensure there are enough procedures for analysis by organisation and patient subgroups. For Wales, data for only two years were available so surgical indicators are reported at a national level. Where results are reported at organisation level (NHS trusts in England or local health boards in Wales), these are typically based on people who were diagnosed at that organisation. Some results, including surgical indicators, are presented for the 23 hepatopancreatobiliary (HPB) specialist centres in England and one surgical specialist centre in Wales.

This report uses National Cancer Registration Data for England, which is currently available for people diagnosed up to the end of 2022. These data have better case ascertainment and completeness of key variables compared to more recent registration data, and can be linked to several datasets including Medicines Dispensed in Primary Care and the Diagnostic Imaging Dataset. Further information is detailed on the NDRS website. To further support quality improvement activities, NPaCA also publishes quarterly reports of a subset of performance indicators (England only), which use more timely Rapid Cancer Registration Data (time lag 4-6 months), available here.

The Audit derives its indicators using information that is routinely collected by the NHS as part of the care given to people diagnosed with pancreatic cancer, rather than data collected specifically for the Audit[1]. For people diagnosed or treated in England, the data are collated, maintained and quality assured by NHS England's National Disease Registration Service (NDRS). For people diagnosed or treated in Wales, data are provided by Wales Cancer Network (WCN)[2], using the Cancer Network Information System Cymru (CaNISC) electronic patient record system. For full details of the data and methods used within this report, please see the NPaCA Methodology Supplement.

1 The audits in NATCAN do not 'collect' clinical data. The cancer audits utilise the nationally mandated flows of data from hospitals to the National Disease Registration Service (NDRS) in NHSE and the Wales Cancer Network in Public Health Wales, thereby minimising the burden of data collection on provider teams.

2 NHS Wales is part way through a cancer informatics implementation programme which is designed to improve the data capture and reporting capabilities of NHS Wales. This ongoing implementation is impacting the data quality within NHS Wales in the short term with multiple systems being used and different implementation dates across cancer sites and organisations resulting in a complex data landscape. NHS Wales has committed to continue to submit audit data annually until data submissions are sourced exclusively from the new cancer informatics solution. This will be from 2027 onwards that NHS Wales will be able to supply quarterly data using this new integrated, and more accessible digital platform.

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We report the following performance indicators:

Table 1. *Performance Indicators Included[3]

	England^	Wales#
PI1: Percentage of people who had an FDG-PET/CT scan prior to surgery for pancreatic cancer	No (data unavailable)	Yes (01/22 – 12/23)
PI2: Percentage of people who had a record of being discussed at a multidisciplinary team (MDT) meeting	Yes (01/21 – 12/22)	No (data unavailable)
PI3: Percentage of people undergoing a Whipple procedure (without neoadjuvant chemotherapy) who had a biliary stent placed prior to surgery	Yes (01/20 – 12/22)	Yes (01/22 – 12/23)
PI4: Time from urgent GP referral to first disease-targeted treatment (days)	Yes (01/21 – 12/22)	Yes (01/22 – 12/23)
PI5: Percentage of people with non-metastatic (stage 1-3) pancreatic cancer who received disease-targeted treatment	Yes (01/21 – 12/22)	Yes (01/22 – 12/23)
PI6: Percentage of people with metastatic (stage 4) pancreatic cancer who received disease-targeted treatment	Yes (01/21 – 12/22)	Yes (01/22 – 12/23)
PI7: Percentage of people with pancreatic cancer who received chemotherapy and/or radiotherapy alongside surgery	Yes (01/20 – 12/22)	Yes (01/22 – 12/23)
PI8: Percentage of people with pancreatic cancer who were seen by a clinical nurse specialist (CNS)	Yes (01/21 – 12/22)	No (data unavailable)
PI9: Percentage of people who were prescribed pancreatic enzyme replacement therapy (PERT) in primary care	Yes (01/21 – 12/22)	No (data unavailable)
PI10: Survival at 30- and 90-days, and 1- and 2-years after diagnosis	Yes (01/21 – 12/22) (Nb: 01/20 – 12/22 for 2-year survival)	Yes (01/22 – 12/23)

NOTE: construction of indicators may be different to those reported last year and therefore are not directly comparable. Please refer to the methodology supplement for more detail. Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2020-21.

* See methodology supplement for the exact definitions of each performance indicator

^ England data: National Cancer Registration Dataset (NCRD)

Welsh data: Cancer Network Information System Cymru (CaNISC)

The Audit's website also contains additional materials that accompany this report. These include:

- A methodology supplement with details about the Audit's data sources and methods
- Supplementary results to support data mentioned in the report
- An online glossary that explains technical terms used in this report
- Information about the management of outliers
- Resources to support local monitoring of practice and quality improvement, such as provider level results on the Data Dashboard and downloadable reports and a local action plan template
- A summary of this report for people living with pancreatic cancer and for the public.

3 For treatment-related performance indicators, we include information on treatments delivered within nine months following the date of diagnosis: up to 09/23 in England and 09/24 in Wales

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2. Infographic

Summary of results for people diagnosed with exocrine pancreatic cancer (ICD-10 code C25.0) in England (2021-22) and in Wales (2022-23).

NPaCA
National Pancreatic Cancer Audit

Diagnosis and staging

17,328
diagnoses of pancreatic cancer in England in 2021-22

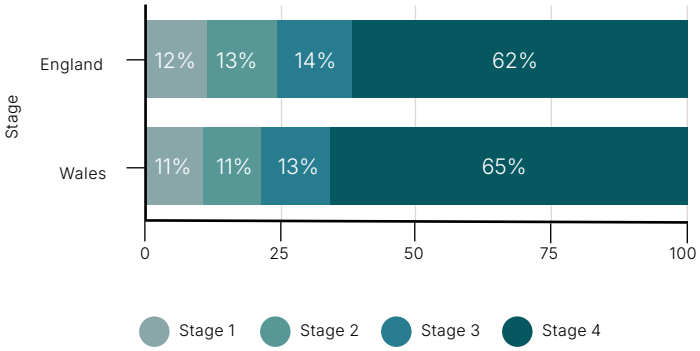
926
diagnoses of pancreatic cancer in Wales in 2022-23

England
51% Men
50% Women

Wales
50% Men
50% Women

74 years
Median age at diagnosis (England and Wales)

Stage at diagnosis*



Work up and waiting times

76% of people had a record of an Multi-Disciplinary Team discussion in England.

Median waiting times** (IQR***)

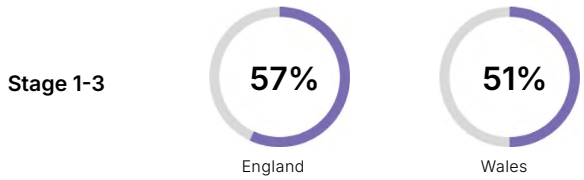
GP Referral → England: 20 (9 to 36) days; Wales: 21 (7 to 43) days → **Diagnosis**

Proportion of people diagnosed within 21 days:
54% (England); 51% (Wales)

GP Referral → England: 78 (59 to 100) days; Wales: 90 (63 to 121) days → **Treatment**

Treatment

Percentage of people receiving any form of disease-targeted treatment



65 % (England) and **60%**(Wales) of people with performance status 0-2 (stage 1-3) received any form of disease-targeted treatment

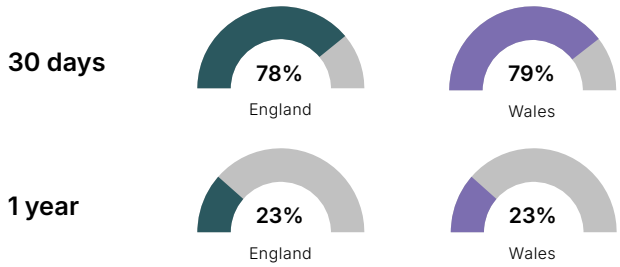
Supportive care

54% of people diagnosed during 2020-21 in England were prescribed PERT in primary care. Note: more likely to be prescribed PERT if receiving disease-targeted treatment (84% vs 38%)

87% of people with new diagnoses of pancreatic cancer were seen by a Clinical Nurse Specialist in England ****

Survival

Percentage of people who survived for 30 days or 1 year after diagnosis in England and Wales.



* Based on people with complete staging information available

** The figure is based on people diagnosed after GP referral in both England and Wales

*** Interquartile range - a measure of the spread of the results. It demonstrates the difference between the first quartile (lower 25%) and the third quartile (upper 25%) of results.

**** Information missing for 48% of people

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3. Recommendations

Recommendations developed in collaboration with the NPaCA Clinical Reference Group and based on key findings in this report.

Recommendation	Audience	Audit Findings	Quality Improvement Goal	National Guidance/Standards/Resources
Clinical Recommendations				
1. All NHS pancreatic cancer service providers should map their diagnostic pathways and benchmark their processes in line with hepatopancreatobiliary (HPB) cancer pathway guidance, which sets out recommended sequencing of events for the diagnostic process. Providers should consider performing a case analysis to review cases to understand and develop mitigation strategies for challenges in their pathways and identify areas of good practice.	England: Cancer Alliances working with NHS trusts Wales: health boards	Among people diagnosed via an urgent GP referral route, the median time from referral to disease-targeted treatment (surgery, chemotherapy and/or radiotherapy) was 78 days (IQR[4] 59 to 100) in England and 90 days (IQR 63 to 121) in Wales. Median time from referral to diagnosis: 20 days (IQR 9 to 36) in England and 21 days (IQR 7 to 43) in Wales. 54% of people in England and 51% in Wales were diagnosed within 21 days of urgent GP referral, and 64% in England and 60% in Wales were diagnosed within 28 days.	Goal #2: Optimise diagnostic and treatment pathways to reduce the time between referral and start of disease-targeted treatment	NHSE 2024: HPB best practice timed diagnostic pathway NHS Wales National Optimal Pathway for pancreatic cancer PCUK Optimal Care Pathway report
2. Review pancreatic cancer referral pathways to ensure all patients are discussed at an appropriate MDT meeting to maximise the opportunity for patients to receive specialist care in line with best practice guidance. Providers should ensure information about MDT discussions is submitted to NDRS.	England: Cancer Alliances working with NHS trusts	76% of people diagnosed with pancreatic cancer in England had a record of being discussed at an MDT meeting, as recommended by NICE (QS 177). In 16 of 119 NHS trusts, more than 90% of patients had a record of MDT discussion; in 28 NHS trusts, this figure was less than 70%. Information not available for Wales.	Goal #1: Increase the percentage of people who have diagnostic procedures and a process of diagnosis consistent with national recommendations for pancreatic cancer	NICE guideline NG85 2018: *A specialist pancreatic cancer multidisciplinary team should decide what care is needed and involve the person with suspected or confirmed pancreatic cancer in the decision. Care should be delivered in partnership with local cancer units.*
3. Ensure a personalised approach is taken to optimise a person's fitness, nutrition and medication to prevent deconditioning prior to starting treatment. This may include the implementation of prehabilitation, oncogeriatric services, dietetic support and early access to enhanced supportive care/supportive oncology services. Providers should review cases of people who survived more than three months but did not receive any disease-targeted treatment to understand the reasons for decisions not to treat.	England: Cancer Alliances working with NHS trusts Wales: health boards	Among people diagnosed with non-metastatic (stage 1-3) pancreatic cancer, 57% in England and 51% in Wales received a form of disease-targeted treatment (surgery, chemotherapy and/or radiotherapy). In England, this ranged widely across NHS trusts, IQR 43% to 63%. Among those with performance status (PS) 0-2, rates of treatment were 65% in England and 60% in Wales. Among people diagnosed with metastatic (stage 4) pancreatic cancer, 27% in England (IQR 20% to 32%) and 24% in Wales received a form of disease-targeted treatment. Among those with PS 0-2, these figures were 36% in England and 33% in Wales.	Goal #3: Increase the percentage of people with pancreatic cancer (who are fit enough for treatment) who receive disease targeted treatment (surgery, chemotherapy, radiotherapy - both curative and palliative)	NHS England HPB cancer service spec NHS Wales Cancer Network Service Specification for HPB surgery services PCUK Optimal Care Pathway report

4 IQR – Interquartile range

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Recommendation	Audience	Audit Findings	Quality Improvement Goal	National Guidance/Standards/Resources
4. Review provision of clinical nurse specialists (CNS) in providers where there has been a shortfall in CNS review. Ensure that everyone diagnosed with pancreatic cancer has access to a specialist CNS from the point of diagnosis. Providers should ensure contacts with CNS are being recorded and that information is submitted to NDRS.	England: Integrated Care Boards working with NHS trusts Wales: health boards	England: Among people diagnosed with pancreatic cancer who had information about access to a clinical nurse specialist, 87% were seen by a CNS. Information on CNS was missing for 48% of people. Information not available for Wales.	Goal #4: Increase the percentage of people with pancreatic cancer who receive supportive care (care that helps the person to live as well as possible with their cancer and its treatment) in line with national recommendations	NHSE 2024: HPB best practice timed diagnostic pathway PCUK Optimal Care Pathway report: *NHS systems should ensure that everyone with pancreatic cancer, regardless of where they are treated or cared for, has an HPB or upper gastrointestinal CNS as their lead point of contact to oversee their care.*
5. Implement protocols to ensure that all people diagnosed with pancreatic cancer are assessed at their first clinical review for eligibility for pancreatic enzyme replacement therapy (PERT). PERT should be offered to eligible patients who are able to tolerate oral intake.	England: Cancer Alliances working with NHS trusts Wales: health boards	England: 54% of people diagnosed with pancreatic cancer were prescribed pancreatic enzyme replacement therapy (PERT) in primary care (IQR 44 to 60% across NHS trusts). 84% of people who had disease-targeted treatment had a PERT prescription in primary care compared to 38% of people who did not receive disease-targeted treatment.	Goal #4: Increase the percentage of people with pancreatic cancer who receive supportive care (care that helps the person to live as well as possible with their cancer and its treatment) in line with national recommendations	NHSE 2024: HPB best practice timed diagnostic pathway: Cancer Alliances and local stakeholders should take action to improve local healthcare professional awareness of PERT. NHS England HPB cancer service spec NHS Wales Cancer Network Service Specification for HPB surgery services

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4. Results for England and Wales

4.1 Data completeness

Key message: Completeness of data items including stage at diagnosis, performance status and clinical nurse specialist (CNS) involvement needs to be improved in national cancer datasets to enable accurate assessment of the care provided to people diagnosed with pancreatic cancer in England and Wales.

The Audit derives its indicators using cancer registration data from England and Canisc / new healthcare platform for Wales. These are linked to several other datasets that capture information about patient care delivered in NHS settings and patient outcomes. Several data items are essential for the Audit to identify patient subgroups and produce indicator values. Whilst some data items were very complete, overall completeness for others was less than 90% (see Table 2), including stage at diagnosis, performance status[5], and clinical nurse specialist (CNS). Some data items, notably record of MDT discussion, involvement of a CNS and prescribing of pancreatic enzyme replacement therapy (PERT), were not provided in the data extract for Wales.

Table 2. Completeness of key data items in national cancer datasets for people diagnosed with exocrine pancreatic cancer (C25) in England (2021-2022) and Wales (2022-2023)

Data item	England (2021-2022)		Wales (2022-2023)	
	Completeness (%)	Number of NHS trusts with completeness ≥90% (n= 119*)	Completeness (%)	Number of local health boards with completeness ≥90% (n= 6)
Stage at diagnosis	72%	13	71%	1
Performance status	54%	2	87%	3
CNS involvement	52%	1	Not available	Not available

* NHS trusts providing cancer services and with at least 5 diagnoses of pancreatic cancer during 2021-2022.
NOTE: Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2021.

4.2 Patient characteristics

Key message: Almost two-thirds of people who were diagnosed with pancreatic cancer had metastatic (stage 4) disease at diagnosis (62% in England (2021-22) and 65% in Wales (2022-23).

The Audit analysed cancer data for 17,328 people diagnosed with exocrine pancreatic cancer between 1 January 2021 and 31 December 2022 at 119 NHS trusts in England, and 926 people diagnosed between 1 January 2022 and 31 December 2023 at six local health boards in Wales.

Table 3 summarises the characteristics of people included in the Audit. The median age at diagnosis was 74 years in both England and Wales, and there were similar proportions of men and women.

Among people who had information on stage at diagnosis, the majority (62% in England, 65% in Wales) had metastatic (stage 4) disease. Around two-thirds of people with a recorded performance status (PS) had PS 0-1 (fully active or active), but information on PS was missing for almost half of people diagnosed in England.

5 Performance status – a classification system to describe a person's functional status whilst performing routine activities of daily living. Scores range from 0 (fully active with no restrictions) to 5 (dead). Note: only scores of 0-4 are included in the audit. For further detail, please refer to the methodology supplement, Appendix 5.

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Table 3. Characteristics of people diagnosed with exocrine pancreatic cancer in England (2021-2022) and Wales (2022-2023)			
England (2021-2022)		**Wales (2022-2023)**	
No. of people	17,328	No. of people	926
Sex		**Sex**	
Men	51%	Men	50%
Women	50%	Women	50%
Unknown (n=0)		Unknown (n=25)	
Age at diagnosis (years)		**Age at diagnosis (years)**	
<60	13%	<60	12%
60-69	22%	60-69	22%
70-79	35%	70-79	40%
≥80	30%	≥80	27%
Unknown (n=0)		Unknown (n=25)	
Ethnicity		**Ethnicity**	
White	93%	White	98%
Asian or Asian British	3%	Asian or Asian British	<1%
Black or Black British	2%	Black or Black British	<1%
Mixed	<1%	Mixed	<1%
Other ethnic group	2%	Other ethnic group	<1%
Unknown (n=1,124)		Unknown (n=508)	
Index of Multiple Deprivation quintile		**Index of Multiple Deprivation quintile**	
1 – most deprived	17%	1 – most deprived	21%
2	19%	2	19%
3	21%	3	22%
4	22%	4	19%
5 – least deprived	22%	5 – least deprived	18%
Unknown (n=0)		Unknown (n=67)	
TNM stage at diagnosis		**TNM stage at diagnosis**	
1	12%	1	11%
2	13%	2	11%
3	14%	3	13%
4	62%	4	65%
Unknown (n= 4,811)		Unknown (n=266)	
Performance status		**Performance status**	
0 – fully active	36%	0 – fully active	34%
1	32%	1	30%
2	17%	2	16%
3	12%	3	17%
4 – bedbound	3%	4 – bedbound	4%
Unknown (n= 8,015)		Unknown (n=116)	

NOTE: Column percentages may not add up to 100% due to rounding. For further details about the definitions of characteristics, please refer to the Audit's methodology supplement and glossary. NOTE: Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2021.

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4.3 Diagnosis, staging and treatment planning

Key messages:

- Three-quarters (76%) of people diagnosed with pancreatic cancer in England had a record of being discussed at an MDT meeting (data not available for Wales)
- The use of preoperative biliary drainage (biliary stent) among people undergoing a Whipple operation without neoadjuvant treatment varied widely across HPB specialist centres in England and Wales, ranging from 31% to 74%.

Three-quarters (76%) of people diagnosed in England during 2021-2022 had a record of being discussed at a specialist multidisciplinary team (MDT) meeting, as recommended in national guidance (NICE 2018). In 16 of 119 NHS trusts, over 90% of patients had a record of MDT discussion but this figure was less than 70% in 28 NHS trusts. Information on MDT meetings was not available for people diagnosed in Wales.

NICE (2018) recommend that FDG-PET/CT should be offered to people with localised pancreatic cancer to stage their disease before cancer treatment. Data from the Diagnostic Imaging Data Set on the use of FDG-PET/CT were not available to NATCAN at the time of report preparation.

Among people undergoing surgery for pancreatic cancer in the Welsh specialist surgical centre (diagnosed 2022-2023), 40% had a record of a PET scan before surgery. Information on the use of liver MRI was not available for people treated in Wales.

National guidance (NICE 2018) recommends that people with resectable pancreatic cancer and obstructive jaundice, who are sufficiently fit for surgery, should proceed directly to surgery rather than have preoperative biliary drainage. Among people undergoing a Whipple operation for pancreatic cancer without neoadjuvant chemotherapy, 53% in England and 30% in Wales had a biliary stent placed prior to the surgery. This figure varied widely across the 23 HPB specialist centres in England, from 31% to 74%.

4.4 Time from referral to start of treatment

Key message: In England and Wales, over half of people (54% in England, 51% in Wales) diagnosed with pancreatic cancer following a GP referral were diagnosed within 21 days of referral (England figures include people diagnosed following an urgent suspected cancer referral, Wales figures are calculated for people referred by a GP).

Almost two-thirds (64% in England, 60% in Wales) of people were diagnosed within 28 days (faster diagnosis standard). People who went on to receive disease-targeted treatment typically waited 1-2 months (median: 43 days, IQR 30-64) from diagnosis to start treatment.

Among people diagnosed with pancreatic cancer following a GP referral (n=4,863 in England, n= 297 in Wales), 54% in England and 51% in Wales were diagnosed within 21 days from referral (as recommended in the HPB best practice timed diagnostic pathway); 64% in England and 60% in Wales were diagnosed within 28 days of GP referral (the faster diagnosis standard). Due to differences in the construction of waiting time indicators for England and Wales (see methodology supplement) direct comparison of figures is not recommended.

People who went on to receive disease-targeted treatment (surgery, radiotherapy or systemic anti-cancer therapy) (n=2,109 in England, n=110 in Wales) typically waited 1-2 months from diagnosis to starting treatment (see Table 4).

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Table 4. Waiting times for people diagnosed with exocrine pancreatic cancer in England (2021-2022) and Wales (2022-2023)					
	Median (interquartile range), days			% diagnosed within 21 days of referral	% diagnosed within 28 days of referral
	GP referral to diagnosis	Diagnosis to first disease-targeted treatment*	GP referral to first disease-targeted treatment*		
England	20 (9 to 36)	43 (30 to 64)	78 (59 to 100)	54%	64%
Range across NHS trusts**	6 - 39.5	27 - 93.5	49 - 106	12% - 89%	19% - 94%
Wales	21 (7 to 43)	50 (27 to 71)	90 (63 to 121)	51%	60%
Range across local health boards	15 - 34	40 - 63	78 - 115	32% - 59%	40% - 71%

* Based on the date of the first disease-targeted treatment of surgery, radiotherapy or systemic anti-cancer therapy. ** Results presented for NHS trusts with a minimum of 5 urgent GP referral diagnoses for time to diagnosis (n=117 NHS trusts) and with a minimum of 5 urgent GP referral diagnoses who received treatment for time to treatment (n=105 NHS trusts). NOTE: for England, waiting times are calculated for people diagnosed following an urgent suspected cancer GP referral; for Wales, waiting times are calculated for people referred by a GP. NOTE: Care pathways were affected by the COVID-19 pandemic and so will be atypical to some degree during 2021.

4.5 Disease-targeted treatment for pancreatic cancer

Key messages:

- Over half of people diagnosed with non-metastatic (stage 1-3) pancreatic cancer (57% in England, 51% in Wales) received a form of disease-targeted treatment (surgery, radiotherapy and/or systemic anti-cancer therapy) within 9 months of diagnosis.
- Around a quarter of people diagnosed with metastatic (stage 4) pancreatic cancer (27% in England, 24% in Wales) received disease-targeted treatment.
- Rates of disease-targeted treatment were lower among older people and those with poor physical fitness (performance status 3 or 4).

Of people diagnosed with non-metastatic (stage 1-3) pancreatic cancer, 57% in England and 51% in Wales received a form of disease-targeted treatment (surgery, radiotherapy and/or systemic anti-cancer therapy) within 9 months of diagnosis. This figure varied widely across organisations in England (IQR 43% to 63%, across 116 diagnosing NHS trusts) and in Wales (range 33% to 60%, across 6 local health boards). Among those with performance status (PS) 0-2, rates of treatment were 65% in England and 60% in Wales.

Among those with metastatic (stage 4) pancreatic cancer, 27% in England and 24% in Wales received disease-targeted treatment. Among those with PS 0-2, these figures were 36% in England and 33% in Wales.

Rates of treatment were strongly related to performance status and age (Figures 1 and 2), which highlights the need for multi-disciplinary prehabilitation pathways to optimise the fitness of people to receive treatment:

- Among those with non-metastatic disease who were fully active (PS 0), 81% in England and 80% in Wales received disease-targeted treatment; among those with poor performance status (PS 3 or 4), rates of treatment were 7% in England and 9% in Wales.
- Among those with metastatic disease who were fully active (PS 0), 49% in England and 47% in Wales received disease-targeted treatment; among those with poor performance status (PS 3 or 4), rates of treatment were 3% in England and 1% in Wales.
- The percentage of people receiving treatment decreased markedly with older age. Among people in England with stage 1-3 disease and good performance status (PS 0-1), only 35% of people aged ≥80 years received treatment, compared to 74% of those aged 70-79 years.

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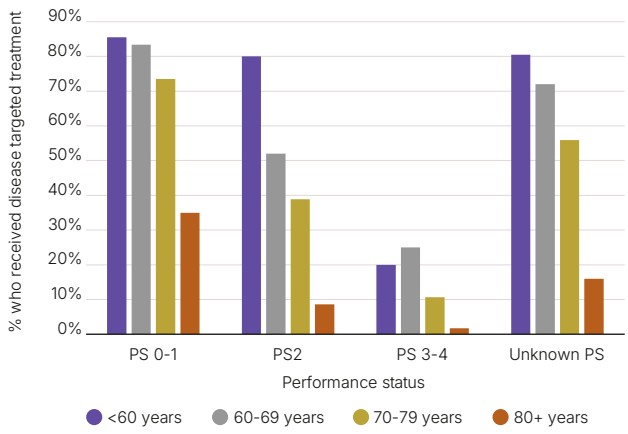
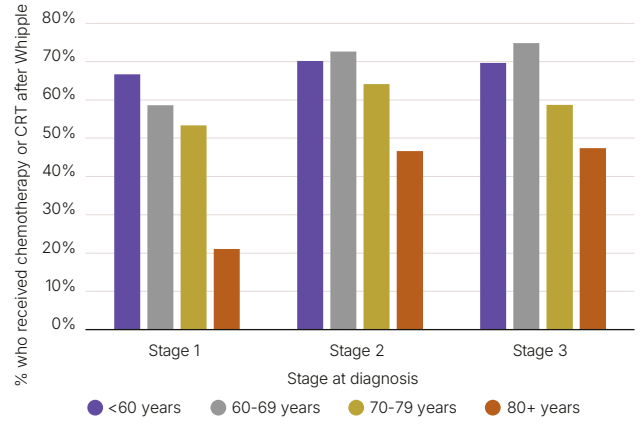
Figure 1. Percentage of people with stage 1-3 pancreatic cancer diagnosed in England during 2021-22 who received a form of disease-targeted treatment (surgery, chemotherapy, radiotherapy), by performance status and age.



Currently, NICE guidance recommends neoadjuvant therapy for people with pancreatic cancer only if it is given as part of a clinical trial (NICE 2018), but this guideline is now dated and there is growing evidence for its use in tumours that are borderline resectable at diagnosis (PCUK Optimal Care Pathway Report). Among those undergoing surgical resection for pancreatic cancer, 12% in England and 9% in Wales received chemotherapy or chemo-radiotherapy (CRT) prior to surgery.

Figure 2. Percentage of people undergoing a Whipple procedure for pancreatic cancer diagnosed in England during 2020-22 who received chemotherapy or chemotherapy+radiotherapy (CRT) after surgery, by stage and age at diagnosis.



NOTE: Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2020-21.

Adjuvant therapy is recommended for those people who are well enough after surgery to tolerate treatment (NICE 2018). Among those people undergoing a Whipple procedure, 62% in England and 72% in Wales received chemotherapy or CRT within 14 weeks after surgery. These rates have increased over time in England, from 53% in 2015 to 63% in 2022. However, there was variation across HPB specialist centres (IQR: 52% to 69% for 2020-22).

4.6 Supportive care for pancreatic cancer

Key messages:

- Information about whether an individual was seen by a CNS was missing for 48% of people diagnosed with pancreatic cancer in England. Of those with complete data, 87% were seen by a CNS around the time of diagnosis. People with longer survival after diagnosis were more likely to have a record of CNS involvement.
- Around half (54%) of people with pancreatic cancer in England had a primary care prescription for pancreatic enzyme replacement therapy (PERT). People who received disease-targeted treatment were more likely to have a prescription for PERT than those who did not receive treatment (84% versus 38%).

Among people diagnosed with pancreatic cancer in England who had complete information about clinical nurse specialist (CNS) involvement, 87% were reported to have been seen by a CNS. This figure varied across organisations in England (IQR 85% to 97%, across 117 NHS trusts). However, information on CNS involvement was missing for 48% of people. The percentage of people seen by a CNS was higher among those with longer survival after diagnosis: 89% of those who were alive at 30 days after diagnosis had a record of being seen by a CNS, compared to 77% of those who died within 30 days of diagnosis.

Around half (54%) of people diagnosed with pancreatic cancer in England during 2021-2022 had a primary care prescription for PERT (IQR 44 to 60% across NHS trusts). There was a notable difference in the rate of PERT prescribing between people who received disease-targeted treatment (84%) and those who did not receive treatment (38%).

Information on CNS involvement and PERT prescribing were not available for Wales.

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4.7 Survival outcomes for people with pancreatic cancer

Key message: Overall survival was low among people diagnosed with pancreatic cancer (1-year survival - 23% in England and Wales; 2-year survival – 10% in England). Survival rates were higher among people diagnosed with non-metastatic disease (1-year – 46% in England; 37% in Wales).

Among people diagnosed with pancreatic cancer, 23% in England (across 119 NHS trusts) and Wales (across 6 local health boards) were alive at one year after diagnosis, while only 10% in England survived at least two years.

Survival was particularly poor among those diagnosed with stage 4 disease: 10% of people with stage 4 disease in England and Wales survived to one year after diagnosis, compared to 46% of people with stage 1-3 disease in England and 37% in Wales (Table 5).

The Audit implements a process to identify providers who may be 'outliers' for 90-day and 1-year overall survival. In this audit cycle, there were no organisations with survival below the expected level across England and Wales. Please see the supplementary results for case-mix adjusted survival rates by NHS trust.

Among those who underwent a Whipple operation, survival was 96% at 90 days post-surgery in England and 100% in Wales, and 77% at one year after surgery in England and 89% in Wales.

Table 5. Survival among people diagnosed with exocrine pancreatic cancer in England (2021-2022) and Wales (2022-2023), overall and by stage at diagnosis

	England				Wales			
Survival from diagnosis, %	Overall (n=17,328)	Stage 1-3 (n=4,772)	Stage 4 (n=7,745)	Unknown stage (n= 4,811)	Overall (n=926)	Stage 1-3 (n=235)	Stage 4 (n=429)	Unknown stage (n=262)
30-day	78%	93%	72%	72%	79%	92%	69%	84%
90-day	53%	82%	37%	49%	52%	78%	32%	61%
1-year	23%	46%	10%	22%	23%	37%	10%	31%
2-year*	10%	22%	3%	11%	n/a	n/a	n/a	n/a

* Calculated for people diagnosed between 1 January 2020 – 31 December 2021 in England to ensure sufficient follow-up. NOTE: NHS services were impacted by the COVID-19 pandemic and so the figures for 2020-21 will be atypical to some degree.

4.8 Care pathways for people with extrahepatic bile duct and ampullary tumours

Key messages:

- Patterns of care for people with extrahepatic bile duct and ampullary tumours (ICD-10 code C24.0 and C24.1) were broadly similar to those reported for people with pancreatic cancer, with similar rates of recorded MDT discussion (76%), waiting times from GP referral to diagnosis and treatment, and CNS involvement (88%).
- Rates of disease-targeted treatment and survival among this cohort were higher than reported for people with pancreatic cancer, which reflects the less advanced stage at diagnosis among people with extrahepatic bile duct and ampullary tumours (66% in England were diagnosed with non-metastatic disease).

The Audit analysed data for 2,500 people diagnosed with extrahepatic bile duct tumours (n=1,573) or ampullary tumours (n=927) between 1 January 2021 and 31 December 2022 in England. Results are only presented at the national-level for these diagnoses given small NHS trust-level volumes of diagnoses for most indicators. Data for Wales are not presented due to the small number of people diagnosed with these tumour types. The characteristics of this cohort are described in Table 6: sociodemographic characteristics were similar to those of people diagnosed with pancreatic cancer, but the percentage diagnosed with metastatic disease was markedly lower at 34% (compared to 62% among people with pancreatic cancer).

Indicators relating to diagnosis, staging, treatment planning and waiting times showed similar patterns among people with extrahepatic bile duct or ampullary tumours to those reported for people with pancreatic cancer (Table 7).

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- Three-quarters of people (76%) had a record of being discussed at an MDT meeting and 69% of those undergoing a Whipple operation had a biliary stent placed prior to surgery.
- Median times from referral to diagnosis (18 days, IQR 9 to 36) and referral to disease-targeted treatment (77 days, IQR 57 to 117) were comparable to those reported for people with pancreatic cancer.
- Rates of disease-targeted treatment among people with extrahepatic bile duct or ampullary tumours were: 67% of those with stage 1-3 disease and 34% of those with stage 4 disease; these values were higher than those with pancreatic cancer.
- Among people who had a Whipple procedure, 57% received chemotherapy or chemoradiotherapy afterwards.
- Among those with complete information about CNS involvement, 88% were seen by a CNS around the time of diagnosis.
- Less than half of people with extrahepatic bile duct or ampullary tumours (44%) had a primary care prescription for PERT.
- Compared to people with pancreatic cancer, those diagnosed with extrahepatic bile duct or ampullary tumours had better survival with almost half of people surviving at least one year from diagnosis and nearly a third surviving two years. This reflects the less advanced stage at diagnosis among this cohort.

Table 6. Characteristics of people diagnosed with extrahepatic bile duct or ampullary tumours in England (2021-2022)

No. of people	**2,500**
Age at diagnosis (years)	
<60	13%
60-69	22%
70-79	36%
≥80	30%
Ethnicity	
White	91%
Asian or Asian British	4%
Black or Black British	2%
Mixed	1%
Other ethnic group	2%
Unknown (n=132)	
TNM stage at diagnosis	
1	16%
2	19%
3	31%
4	34%
Unknown (n= 876)	
Sex	
Men	53%
Women	47%
Index of Multiple Deprivation quintile	
1 – most deprived	17%
2	18%
3	22%
4	22%
5 – least deprived	21%
Performance status	
0 – fully active	43%
1	32%
2	16%
3	8%
4 – bedbound	1%
Unknown (n= 1,084)	

NOTE: Column percentages may not add up to 100% due to rounding. For further details about the definitions of characteristics, please refer to the Audit's methodology supplement and glossary. NOTE: Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2021.

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Table 7. Care of people diagnosed with extrahepatic bile duct or ampullary tumours in England (2021-2022)	
Time from referral to treatment	
Median time from GP referral to diagnosis (days, IQR)	18 (9 to 36); N=335
Median time from GP referral to disease-targeted treatment (days, IQR)	77 (57 to 117); N=192
Median time from diagnosis to disease-targeted treatment (days, IQR)	51 (32.5 to 77.5); N=192
Disease-targeted treatment	
Received disease-targeted treatment, stage 1-3 (%)	67%
Received disease-targeted treatment, stage 1-3, PS 0-2 (%)	70%
Received disease-targeted treatment, stage 4 (%)	34%
Received disease-targeted treatment, stage 4, PS 0-2 (%)	45%
Survival from diagnosis	
30-day	89%
90-day	75%
1-year	48%
2-year	30%
NOTE: Data were impacted by the COVID-19 pandemic and so will be atypical to some degree during 2021.	

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5. Commentary

In this second State of the Nation Report from the National Pancreatic Cancer Audit, we describe the care received by people diagnosed with pancreatic cancer, extrahepatic bile duct tumours and ampullary tumours in England during 2021-22 and Wales in 2022-23 across key areas of the patient pathway (as outlined in the audit's Quality Improvement Plan). We note this was a challenging period for many hospitals as they tackled the backlog of appointments and procedures due to the COVID-19 pandemic.

This year, we have presented the figures for pancreatic cancer (ICD-10 code C25) separately to those with extrahepatic bile duct and ampulla of Vater tumours (ICD-10 code C24.0 and C24.1). Extrahepatic bile duct and ampullary tumours obstruct the drainage of the liver early in their natural history and people typically present with jaundice earlier than those with pancreatic cancer, which may account for the higher proportion of people diagnosed with stage 1-3 disease.

Close to two-thirds of people with pancreatic cancer are diagnosed with stage 4 metastatic disease across England and Wales. Therefore, it is important we review the diagnostic work up for these patients to ensure they are receiving supportive care input early in the diagnostic pathway. Among people with metastatic disease, we note that rates of treatment were low even among people with good performance status at the time of diagnosis (49% and 47% in England and Wales, respectively). Whilst this could be due to patient choice and advanced age at presentation, this may also reflect physical deconditioning whilst on the diagnostic pathway due to the aggressive nature of the disease. For example, there can be difficulties in obtaining a biopsy to confirm the pathological diagnosis, which is often required before oncology teams can initiate anti-cancer therapies. Consequently, it is important to reduce diagnostic delays.

Audit results found only 54% of people with pancreatic cancer in England received a diagnosis within 21 days. This 21-day target is a national recommendation from NHS England's Best Practice Timed Pathway, released in 2024. Whilst this recommendation post-dates the audit period in this report, it is a useful benchmark to assess the efficiency of an organisation's diagnostic pathway. To prevent deconditioning whilst on the diagnostic pathway, we recommend that people with pancreatic cancer should be assessed promptly by members of the multi-disciplinary team so that they are in optimal condition to receive treatment.

Decompression of biliary tracts through placement of a biliary stent prior to a Whipple procedure is an area of wide variation noted from the audit data (53% nationally, variation from 31% to 74% across the 23 specialist HPB surgical centres in England). The NICE guidance for management of pancreatic cancer (NG85) was published in 2018 and recommends proceeding straight to a Whipple procedure to relieve biliary obstruction if a person's disease is deemed resectable. However, we note that clinical practice and protocols vary widely across the nation, and that NICE guidance in this area may require review, including the use of endoscopic ultrasound and sedation to improve pathology sampling concurrently with biliary drainage.

There are other areas where the NICE guidance for pancreatic cancer no longer reflects current evidence. For example, it is recommended that neo-adjuvant chemotherapy should only be considered as part of a clinical trial but there is a growing body of evidence to support its use in those with borderline resectable and locally advanced tumours. Given that NICE guidance is used to benchmark clinical practice, it is essential that it is reviewed and updated to reflect the current evidence for best practice. This is of particular importance as we note that one year survival rates in England and Wales remain among the lowest in Europe[6]. 90-day and 1-year overall survival is subject to the Audit's outlier process given the variation in outcomes across the nation.

The NPaCA will be rolling out a new Quality Improvement initiative in Autumn 2025 where we aim to feedback the proportion of people receiving disease-targeted treatment for non-metastatic disease to providers. This indicator is of particular importance given the regional variation noted across the country.

Provider level results for certain indicators are currently available on a quarterly basis (curated using 'Rapid Cancer Registry' data) through an interactive online dashboard, enabling providers to reflect on real-time data. In addition to these, results from this annual report (curated using 'Gold standard' data) have been added to this dashboard. We strongly encourage providers to use this information to review and improve care to people with pancreatic cancer.

6 Cabasag, C.J., et al, 2022. Pancreatic cancer survival by stage and age in seven high-income countries (ICBP SURVMARK-2): a population-based study. *British Journal of Cancer, 126*(12), pp.1774-1782.

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