Quality Performance Indicators Audit Report

Tumour Area:	HPB Cancer
Patients Diagnosed:	1st January – 31st December 2018
Published Date:	14th February 2020
Clinical Commentary:	Mr. Stephen McNally North Cancer HPB Clinical Director

1. HPB Cancer in Scotland

Hepatic, pancreatic and biliary (HPB) cancer combined is the fourth most common cancer type in Scotland with approximately 1400 cases diagnosed during 2017. Incidence have increased in the last decade, most notably for liver cancer, where the long-term and persistent increase in overweight and obesity is thought to explain the 61% increase in incidence observed over the last decde[1].

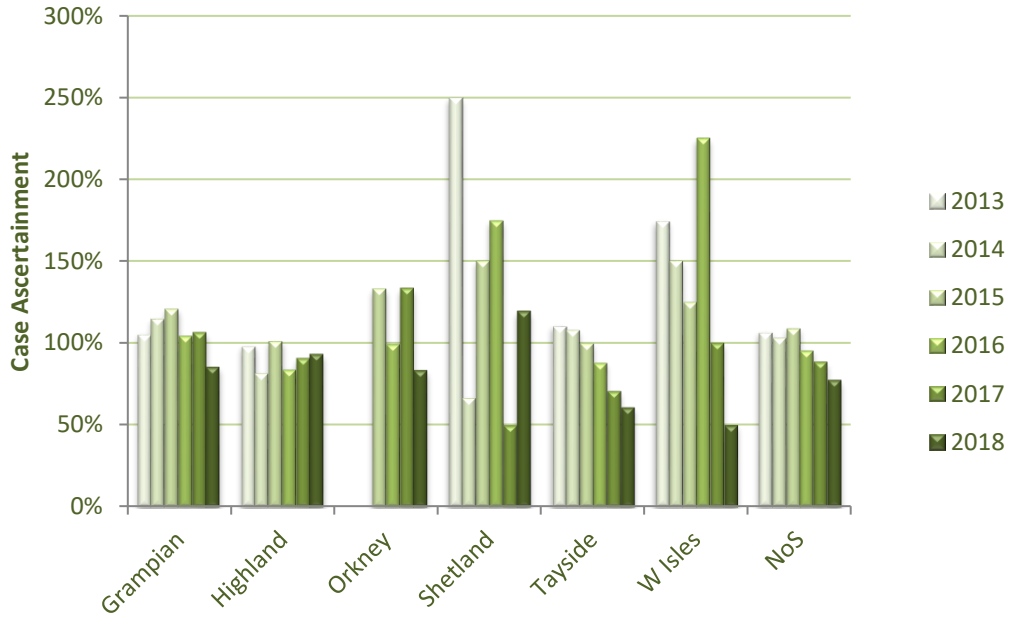
Relative survival from pancreatic cancer in Scotland has increased in the short term, however there has been no change in 5 year survival since 1987-91[2]. The table below details the percentage change in 1 and 5 year relative survival for patients diagnosed 1987-1991 to 2007-2011. Survival of patients with hepatic (liver) & biliary tract cancer were not included within these analysis

Relative age-standardised survival for pancreatic cancer in Scotland at 1 year and 5 years showing percentage change from 1987-1991 to 2007-2011[2].

Relative survival at 1 year (%)		Relative survival at 5 years (%)	
2007-2011	% change	2007-2011	% change
19.5%	+ 5.5%	3.6%	- 0.1%

2. Patient Numbers and Case Ascertainment in the North of Scotland

Between 1st January and 31st December 2018 a total of 327 cases of HPB cancer were diagnosed in the North of Scotland and recorded through audit. Case ascertainment was 77.3%, lower than in previous years. Never-the-less, QPI calculations based on data captured are considered to be representative of patients diagnosed with ovarian cancer during the audit period.



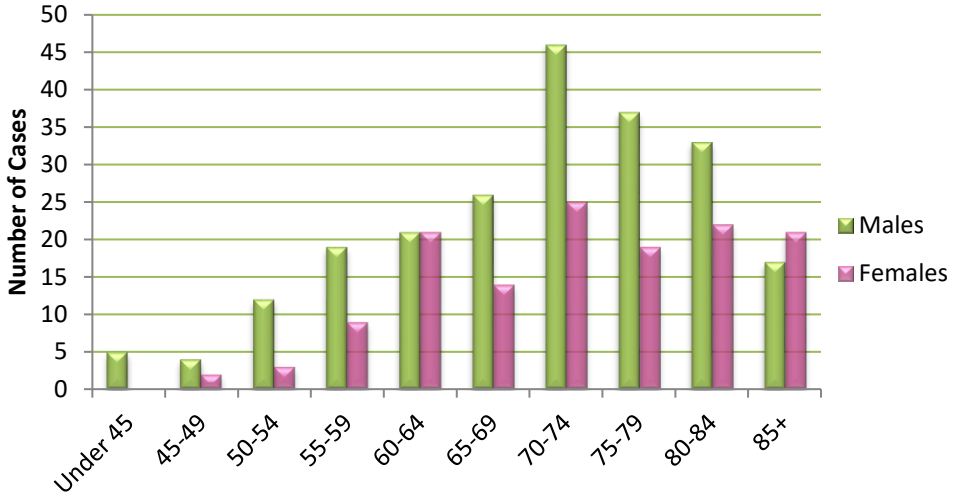
Case ascertainment by NHS Board for patients diagnosed with HPB cancer in 2013-2018.

	Grampian	Highland	Orkney	Shetland	Tayside	W Isles	NoS
No. of Patients 2018	133	84	3	5	99	3	**327**
% of NoS total	40.7%	25.7%	0.9%	1.5%	30.3%	0.9%	**100%**
Mean ISD Cases 2013-17	156.2	90.2	3.6	4.2	162.8	6.0	**423.0**
% Case ascertainment 2018	85.1%	93.1%	83.3%	119.0%	60.8%	50.0%	**77.3%**

For patients included within the audit, data collection was near complete.

3. Age Distribution

The figure below shows the age distribution of men and women diagnosed with HPB cancer in the North of Scotland in 2018, with numbers of patients diagnosed highest in the 70-74 year age bracket.



Age distribution of patients diagnosed with HPB cancer in 2018.

4. Performance against Quality Performance Indicators (QPIs)

Definitions for the QPIs reported in this section are published by Health Improvement Scotland[4], while further information on datasets and measurability used are available from Information Services Division[5]. Data for most QPIs are presented by Board of diagnosis; however surgical QPIs (QPIs 5 (liver transplant and resection), 8, 10 and 11 (surgical resection) are presented by Board of Surgery, while QPIs 5 and 11 (non-surgical treatments) are reported by Board of non-surgical treatment. In addition the clinical trials and research study access QPI is reported by patients NHS Board of residence. Please note that where QPI definitions have been amended, results are not compared with those from previous years.

5. Governance and Risk

Governance is defined as the combination of structures and processes at all levels to lead on North quality performance including:

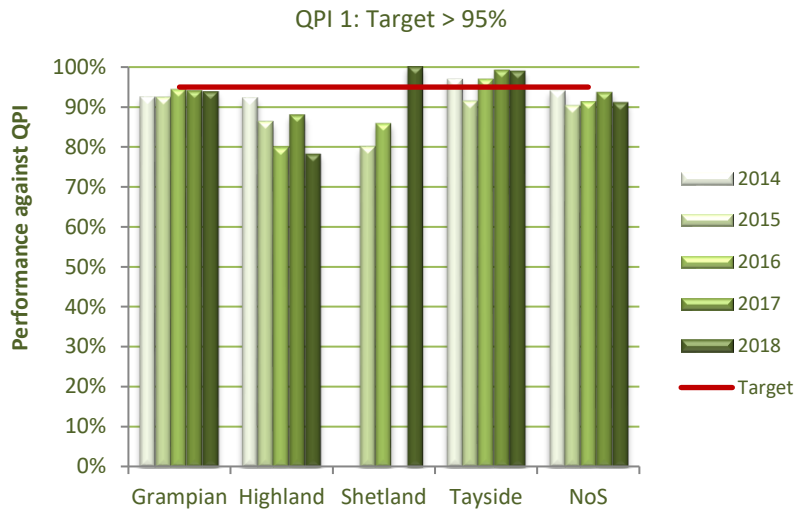
- Ensuring accountability for quality and required standards
- Investigating and taking action on sub-standard performance
- Identifying, sharing and ensuring delivery of best-practice
- Identifying and managing risks to ensure quality of care
- Driving continuous improvement

Our current governance structure provides assurance to the boards that risks associated QPIs are being addressed as an alliance. Clinical risks are discussed at the North Cancer HPB Pathway Board and North Cancer Clinical Leadership Group (NCCLG). Risk levels are jointly agreed. The NCCLG are presented with all available evidence and actions so they have all the information to define the risk in a collaborative way.

- **Tolerate -** Accept the risk at its current level
- **Mitigate -** Reduce or mitigate the risk, in terms of reducing the likelihood of its occurrence or reducing the severity of impact if it does occur. This can be assessed through the action plans provided or the information provided is appropriate to prevent reoccurrence.
- **Escalate -** Escalate the risk to the appropriate committee and/or take further action as the mitigations were not suitable or there are no actions identified to mitigate the risk. This will be revisited by the NCCLG for further risk discussion.
- **Immediate -** Immediate action is required to prevent the risk reoccurring. This risk will have major impact on patient care delivery and the consequences thereafter. Very few risks should occur in this level.

The full governance document on risk should be referred to in conjunction with this summary, which is available on the NCA website[6].

QPI 1	Multi-Disciplinary Team (MDT) Meeting
Proportion of patients with HPB cancer who are discussed at MDT meeting before definitive treatment.	

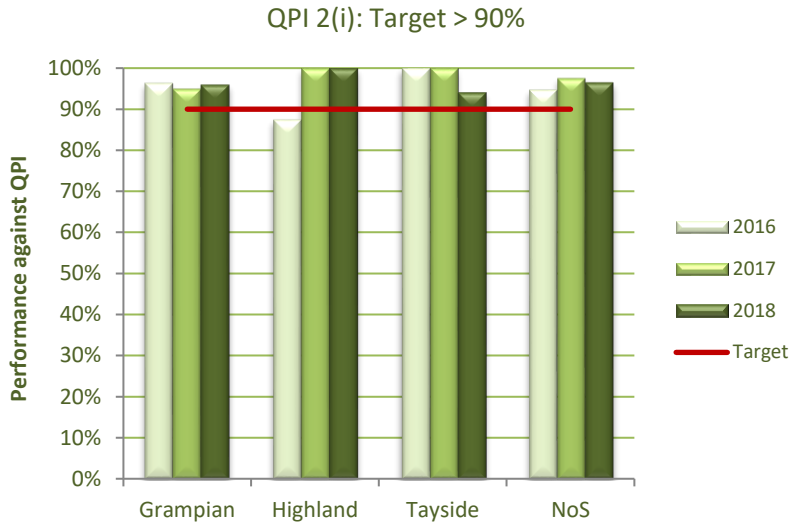


	Performance (%)	Numerator	Denominator
Grampian	**93.7%**	119	127
Highland	**78.2%**	61	78
Orkney*	-	-	-
Shetland	**100%**	5	5
Tayside	**98.9%**	93	94
W Isles*	-	-	-
NoS	**91.0%**	**282**	**310**

Clinical Commentary	Where patients are not discussed at MDT meeting prior to definitive treatment, this is usually due to their requirement for best supportive care required immediately. These patients will often be discussed at MDT but decisions are made without waiting for MDT due to the urgency of their condition.
Actions	No action required
Risk Status	Tolerate

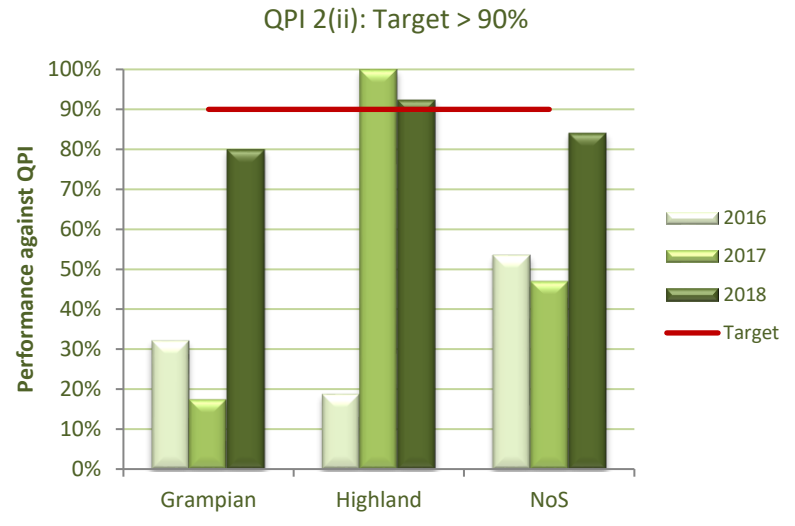
QPI 2	Diagnosis and Staging of HCC
Proportion of patients with HCC who have undergone computerised tomography (CT) or Magnetic Resonance Imaging (MRI) and with full information recorded.	

(i) Patients with HCC undergoing CT or MRI



	Performance (%)	Numerator	Denominator
Grampian	**96.0%**	24	25
Highland	**100%**	13	13
Orkney	-	0	0
Shetland*	-	-	-
Tayside	**94.1%**	16	17
W Isles	-	0	0
NoS	**96.5%**	**55**	**57**

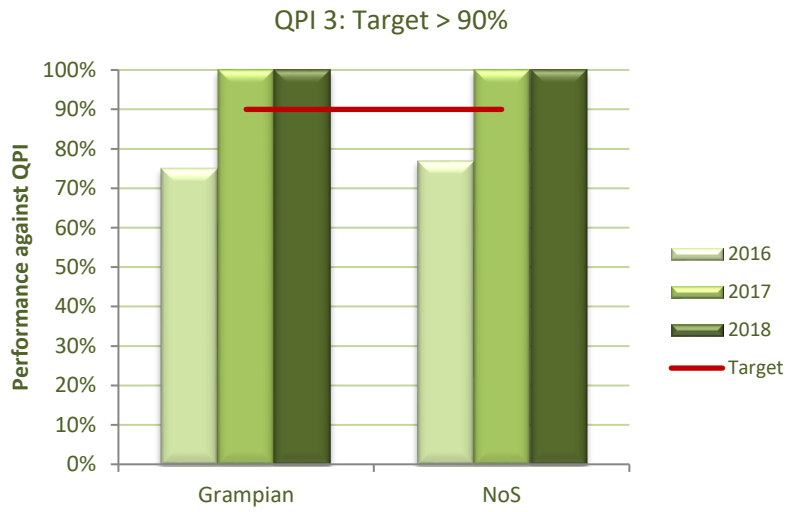
(ii) Patients with HCC undergoing CT or MRI with full information recorded



	Performance (%)	Numerator	Denominator
Grampian	**80.0%**	20	25
Highland	**92.3%**	12	13
Orkney	-	0	0
Shetland*	-	-	-
Tayside*	-	-	-
W Isles	-	0	0
NoS	**84.1%**	**37**	**44**

Clinical Commentary	Improvement should be noted and this is expected to continue as imaging information is being recorded on a MDT form prospectively during MDT discussion within NHS Grampian. With agreed minimum datasets for discussing patients with HCC within each MDT, results for this QPI should continue to improve.
Actions	No action required
Risk Status	Tolerate

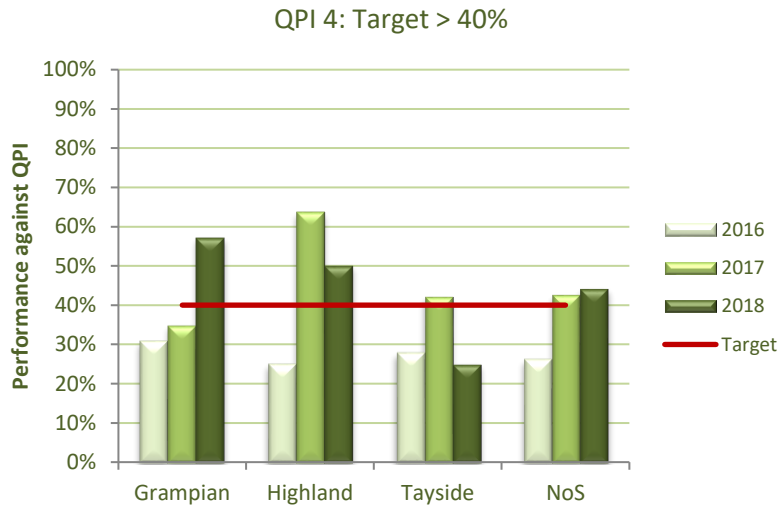
QPI 3	Referral to Scottish Liver Transplant Unit
Proportion of patients with HCC who meet the current UK listing criteria for orthotopic liver transplantation referred to the Scottish Liver Transplant Unit (SLTU) for consideration of liver transplantation.	



	Performance (%)	Numerator	Denominator
Grampian	**100%**	6	6
Highland*	-	-	-
Orkney	-	0	0
Shetland*	-	-	-
Tayside	-	0	0
W Isles	-	0	0
NoS	**100%**	**9**	**9**

Clinical Commentary	All patients meeting the eligibility criteria for referral were referred for consideration for a transplant.
Actions	None
Risk Status	Tolerate

QPI 4	Palliative Treatment for HCC
Proportion of patients with HCC not suitable for treatment with curative intent (liver transplantation, resection or ablative therapies) that undergo specific treatment with palliative intent (Trans-arterial chemoembolisation (TACE) or Systemic Anti Cancer Therapy (SACT)).	



	Performance (%)	Numerator	Denominator
Grampian	**57.1%**	8	14
Highland	**50.0%**	4	8
Orkney	-	0	0
Shetland	-	0	0
Tayside	**25.0%**	3	12
W Isles	-	0	0
NoS	**44.1%**	**15**	**34**

Clinical Commentary	The North of Scotland achieved this QPI measure across all three cancer centres, except NHS Tayside who have confirmed that all patients who are fit are referred for treatment with palliative intent.
Actions	None
Risk Status	Tolerate

QPI 5	30 and 90 day Mortality after Curative or Palliative Treatment for HCC
Proportion of patients with HCC undergoing disease specific treatment, either curative (liver transplantation, resection or ablation) or palliative (Trans-arterial chemoembolisation (TACE) or Systemic Anti Cancer Therapy (SACT)) who die within 30 or 90 days of definitive treatment.	

Liver Transplant

No patients diagnosed in the North of Scotland in 2018 had a liver transplant undertaken within the region.

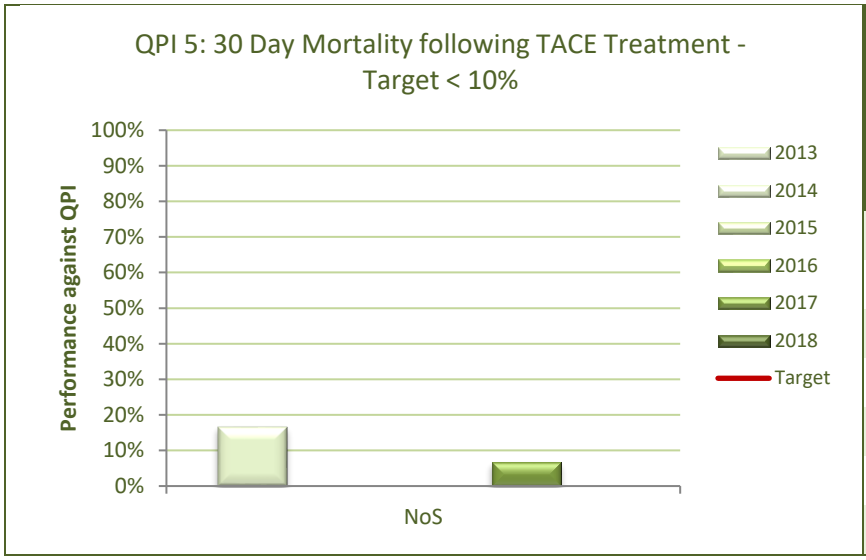
Surgical Resection

Fewer than 5 patients diagnosed in the North of Scotland in 2018 had surgical resection undertaken within the region. None of these patients died within 30 or 90 days of treatment.

Ablation

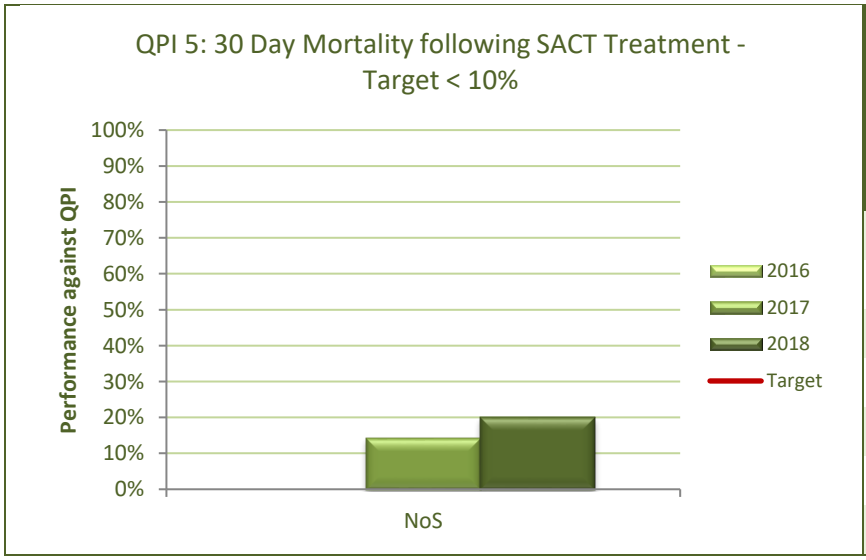
Fewer than 5 patients diagnosed in the North of Scotland in 2018 had ablation undertaken within the region. None of these patients died within 30 or 90 days of treatment.

TACE



	Performance (%)	Numerator	Denominator
Grampian	**0%**	0	9
Highland*	-	-	-
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	0	0
NoS	**0%**	**0**	**11**

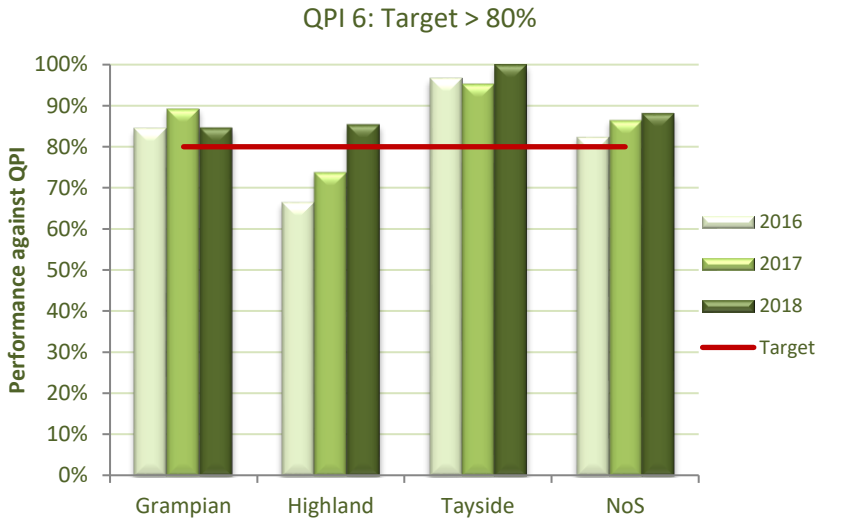
SACT



	Performance (%)	Numerator	Denominator
Grampian	-	0	0
Highland*	-	-	-
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	0	0
NoS	**20.0%**	**1**	**5**

Clinical Commentary	Mortality reviews continue to be embedded within board practices, furthermore a national MDM held its annual mortality review meeting in November 2019 and the outcomes from this are reported back to the Pathway Board to support regional learning. One target for 30-day mortality following SACT was outwith tolerance, although this represents one patient death from a denominator of five.
Actions	1. NCHPBPB to begin regional morbidity and mortality reviews in March 2020.
Risk Status	Mitigate

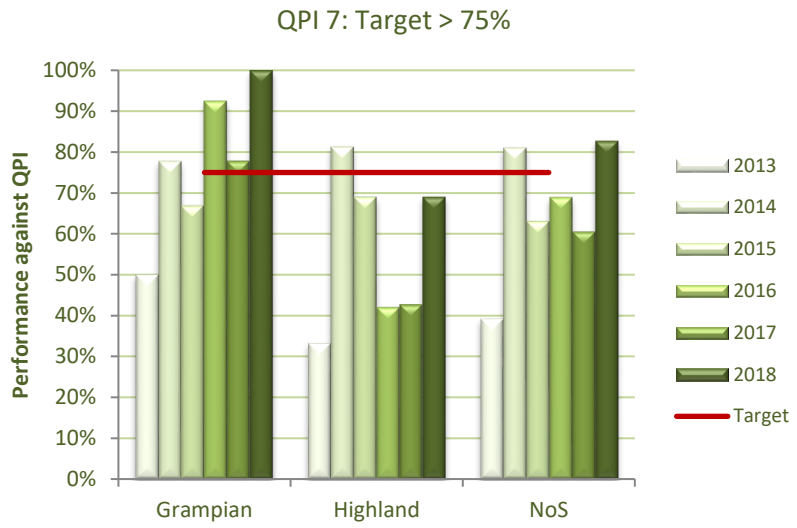
QPI 6	Radiological Diagnosis of Pancreatic, Duodenal or Biliary Tract Cancer
Proportion of patients with pancreatic, duodenal or biliary tract cancer who undergo CT of the chest, abdomen and pelvis	



	Performance (%)	Numerator	Denominator
Grampian	**84.6%**	55	65
Highland	**85.4%**	41	48
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**100%**	32	32
W Isles*	-	-	-
NoS	**88.1%**	**133**	**151**

Clinical Commentary	The North of Scotland achieved this QPI for the third year in a row.
Actions	None
Risk Status	Tolerate

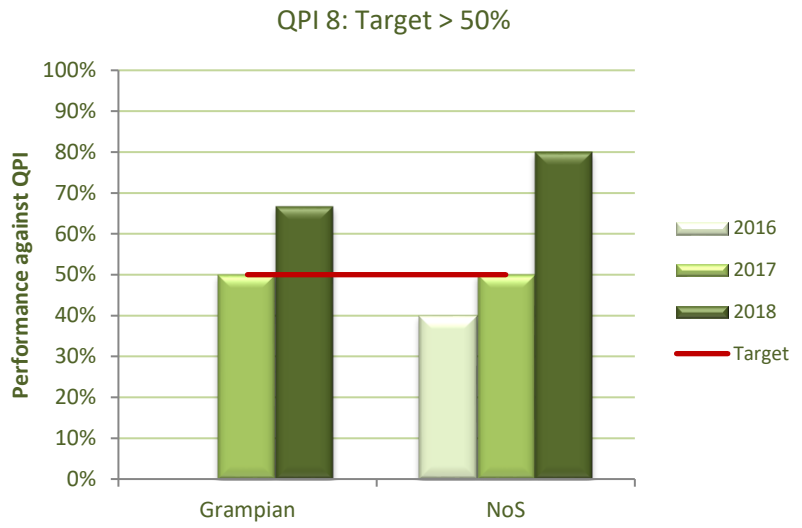
QPI 7	Pathological Diagnosis of Pancreatic, Duodenal or Biliary Tract Cancer
Proportion of patients with pancreatic, duodenal or distal biliary tract cancer undergoing non-surgical treatment who have a cytological or histological diagnosis.	



	Performance (%)	Numerator	Denominator
Grampian	**100%**	9	9
Highland	**69.2%**	9	13
Orkney	-	0	0
Shetland*	-	-	-
Tayside*	-	-	-
W Isles*	-	-	-
NoS	**82.8%**	**24**	**29**

Clinical Commentary	Results in the North of Scotland improved for patients diagnosed in 2018 and achieving the 75% target for the first time in five years. Continued improvement is expected with changes in tissue sampling techniques in Highland.
Actions	None
Risk Status	Tolerate

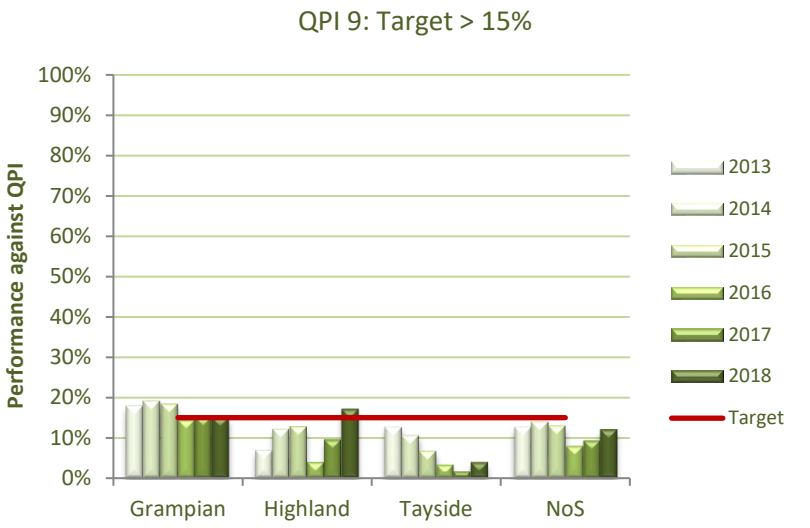
QPI 8	Systemic Therapy for Pancreatic Cancer
Proportion of patients undergoing resection for pancreatic cancer receiving neo-adjuvant or adjuvant chemotherapy.	



	Performance (%)	Numerator	Denominator
Grampian	**66.7%**	4	6
Highland*	-	-	-
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	0	0
NoS	**80.0%**	**8**	**10**

Clinical Commentary	The North of Scotland achieved this target for patients diagnosed in 2018.
Actions	None
Risk Status	Tolerate

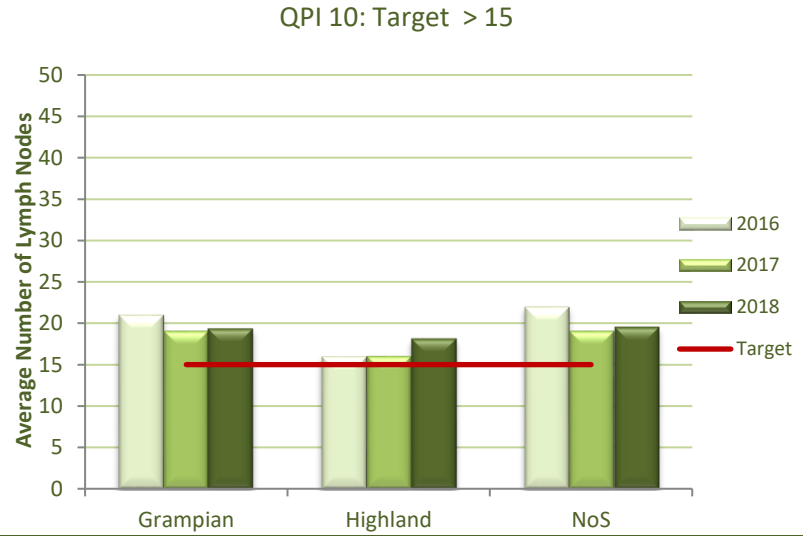
QPI 9	Resection Rate for Pancreatic, Duodenal or Bilary Tract Cancers
Proportion of patients who undergo resection for pancreatic, distal biliary tract or duodenal cancer.	



	Performance (%)	Numerator	Denominator
Grampian	**15.0%**	12	80
Highland	**17.0%**	9	53
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**4.0%**	2	50
W Isles*	-	-	-
NoS	**12.0%**	**23**	**191**

Clinical Commentary	The resection rate in the North of Scotland again fell short of the 15% target. This is in keeping with the results across Scotland, and reflects that this QPI was introduced as an aspirational target which may not be achievable.
Actions	This QPI is to be reviewed nationally this year as part of the QPI review process and may not be continued.
Risk Status	Tolerate

QPI 10	Lymph Node Yield
Average number of lymph nodes resected and pathologically examined per patient with pancreatic, duodenal or distal biliary tract cancer who undergo pancreatoduodenectomy performed by a specialist centre, over a 1 year period.	

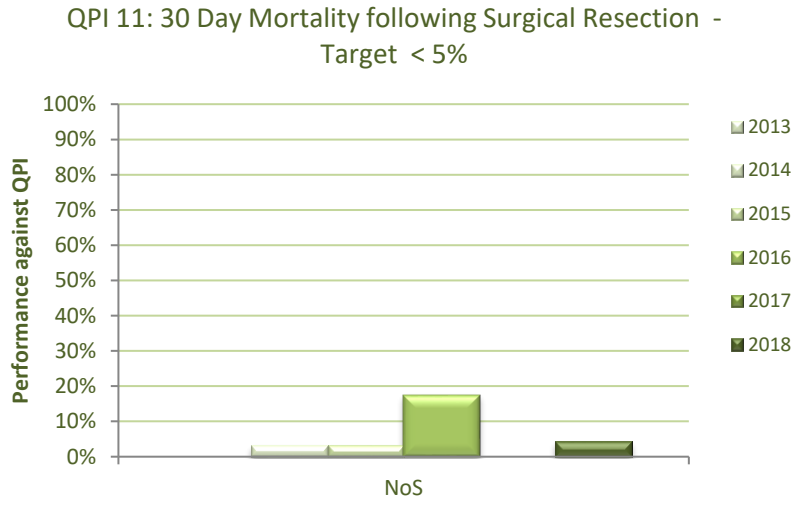


	Average Yield	Number of Nodes	Number of Procedures
Grampian	**19.3**	193	10
Highland	**18.1**	163	9
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	0	0
NoS	**19.5**	**410**	**21**

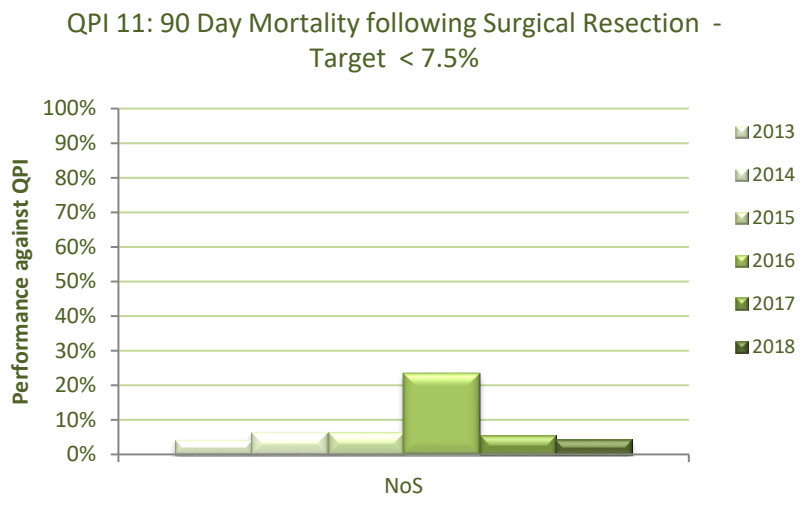
Clinical Commentary	The surgical service in the North of Scotland continues to achieve this target with an average yield of 19.5 lymph nodes, above the 15 target.
Actions	None
Risk Status	Tolerate

QPI 11	30 and 90 Day Mortality After Curative or Palliative Treatment for Pancreatic, Duodenal or Distal Biliary Tract Cancer
Proportion of patients with pancreatic, duodenal or distal biliary tract cancer who die within 30/90 days of definitive treatment with curative intent.	

Surgical Resection



	Performance (%)	Numerator	Denominator
Grampian	**8.3%**	1	12
Highland	**0%**	0	9
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	0	0
NoS	**4.3%**	**1**	**23**

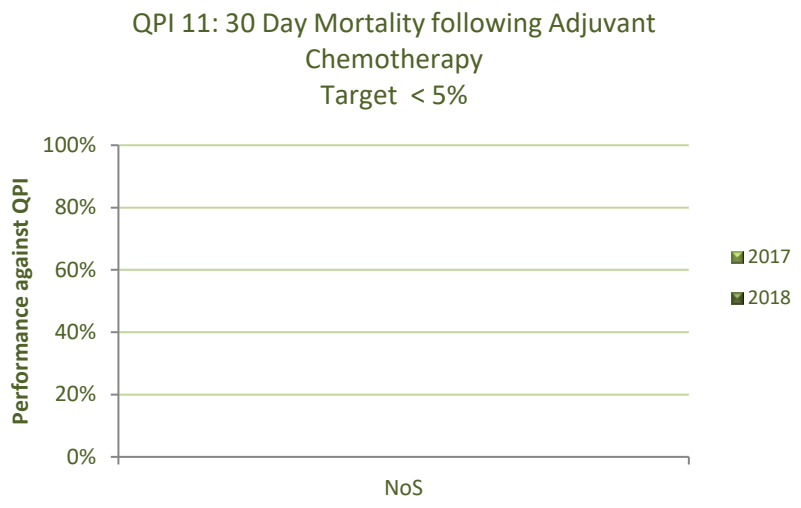


	Performance (%)	Numerator	Denominator
Grampian	**8.3%**	1	12
Highland	**0%**	0	9
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	0	0
NoS	**4.3%**	**1**	**23**

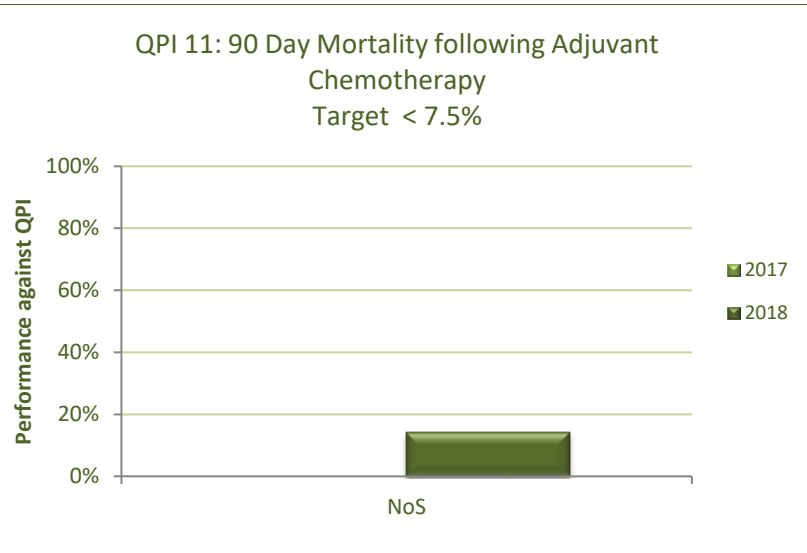
Neo-adjuvant Chemotherapy

Fewer than 5 patients diagnosed in the North of Scotland in 2018 had neo-adjuvant chemotherapy undertaken within the region.; all were alive 30 and 90 days after treatment.

Adjuvant Chemotherapy



	Performance (%)	Numerator	Denominator
Grampian	**0%**	0	7
Highland	**0%**	0	7
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	0	0
NoS	**0%**	**0**	**15**

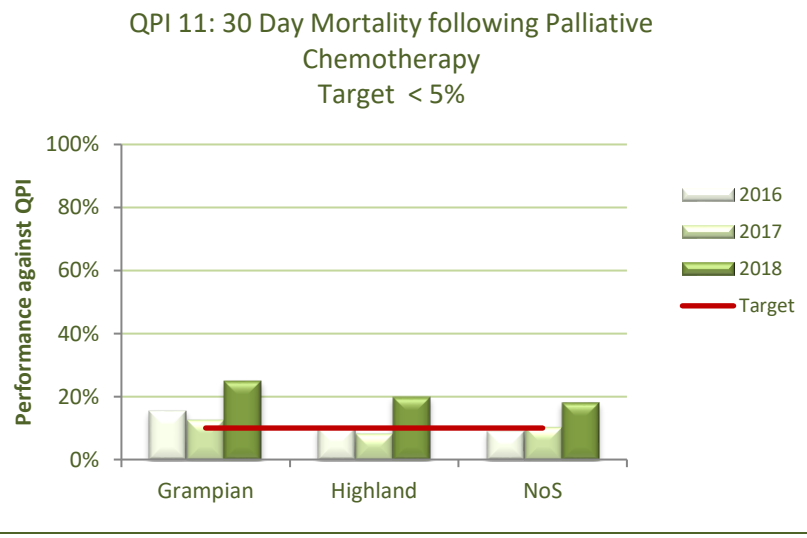


	Performance (%)	Numerator	Denominator
Grampian	**16.7%**	1	6
Highland	**14.3%**	1	7
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles	-	0	0
NoS	**14.3%**	**2**	**14**

Neo-adjuvant Chemotherapy

Fewer than 5 patients diagnosed in the North of Scotland in 2018 had chemoradiotherapy undertaken within the region. These patients were alive 30 and 90 days after treatment.

Palliative Chemotherapy



	Performance (%)	Numerator	Denominator
Grampian	**25.0%**	2	8
Highland	**20.0%**	2	10
Orkney	-	0	0
Shetland	-	0	0
Tayside*	-	-	-
W Isles*	-	-	-
NoS	**18.2%**	**4**	**22**

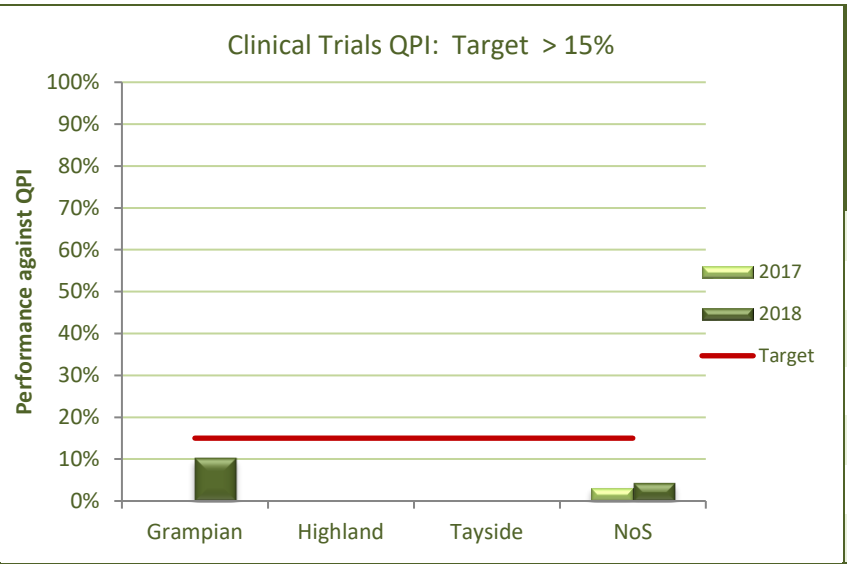
Clinical Commentary	This is the first time in 3 years that the North of Scotland has failed this QPI and the percentages reflect small numbers. A single patient died postoperatively after resection with the North of Scotland overall achieving the target for 30 and 90 day mortality. Two patients died within 90 days of adjuvant chemotherapy, both of whom had early recurrent disease. Four patient died within 30 days of palliative chemotherapy, and a more cautious approach to palliative chemotherapy in advanced disease is proposed.
Actions	1. HPB Clinical Director to lead discussion at Pathway Board about North approach in selecting treatments for patients with advanced disease. 2. Pathway Board to undertake a detailed review of cases where this trend continues.
Risk Status	Mitigate

QPI 12	Volume of Cases per Centre / Surgeon
Number of surgical resections for pancreatic, duodenal or distal biliary tract cancer performed by a specialist centre, and surgeon, over a 1 year period.	

Target:	Minimum 4 procedures per surgeon		Minimum of 11 procedures per centre	
NHS Board of Surgeon	Surgeon	Number of Cases	Surgical Centre	Number of Cases
Grampian	Surgeon 1	6	ARI	11
	Surgeon 2	2		
	Surgeon 3	6		
Highland	Surgeon 4	1	Raigmore	9
	Surgeon 5	5		
	Surgeon 6	4		
	Surgeon 7	8		
Tayside	Surgeon 8	2	Ninewells	2

Clinical Commentary	Individual surgeons have addressed low numbers by adopting dual consultant operating, which each centre is considering. Tayside was exporting cases during 2018, but are now retaining all of their own cases, so numbers for 2019 are expected to be higher. The NCHPBPB are looking at developing a single cancer service for the North of Scotland to maximise experience.
Actions	1. Ongoing discussion within the HPB pathway board to align services, commencing with the establishment of regional MDT and mortality reviews. 2. Pathway Board actions will feed into the work of the North of Scotland Surgery SLWG to be established in 2020.
Risk Status	Mitigate

Clinical Trials and Research Study Access QPI
Proportion of patients diagnosed with HPB Cancer who are consented for a clinical trial / research study. Data reported are for patients consented in 2018.



	Performance (%)	Numerator	Denominator
Grampian	**10.2%**	16	156
Highland	**0%**	0	90
Orkney*	-	-	-
Shetland*	-	-	-
Tayside	**0%**	0	163
W Isles	**0%**	0	6
NoS	**4.3%**	**18**	**423**

Clinical Commentary	Only a small number of patients were recruited into trials or studies in 2018. This is an ongoing area of development. With the opening of PrecisionPanc and PRIMUS 001 now at each site, it is expected to rise over the coming years.
Actions	1. NCA to provide list of active clinical trials and disseminate to members through Pathway Board meetings.
Risk Status	Tolerate

References

1. Information Services Division. Cancer Incidence and Prevalence in Scotland (to December 2017), 2019. Available at: https://www.isdscotland.org/Health-Topics/Cancer/Publications/2019-04-30/2019-04-30-Cancer-Incidence-Report.pdf

2. NHS National Services Scotland. Cancer Survival in Scotland, 1987-2011. 2015. https://isdscotland.scot.nhs.uk/Health-Topics/Cancer/Publications/2015-03-03/2015-03-03-CancerSurvival-Report.pdf

3. Scottish Cancer Taskforce, 2017. HepatoPancreatoBiliary Cancer Clinical Performance Indicators, Version 3.0. Health Improvement Scotland. http://www.healthcareimprovementscotland.org/his/idoc.ashx?docid=243562f7-c72c-453a-8719-7d390a0aacd1&version=-1

4. http://www.isdscotland.org/Health-Topics/Cancer/Cancer-Audit/

5. https://www.nrhcc.scot/uploads/tinymce/NCA/NCA%20Governance/NCA-GOV-QPI-Process-Explained.pdf

Appendix: List of clinical trials for patients with HPB cancer into which patients were recruited in 2018.

Trial	Principle Investigator	Patients consented into trial in 2018
FIGHT-202	Kathryn Connolly (Grampian)	y
PrecisionPanc	Bassam Alkari (Grampian) Asa Dahle-Smith (Tayside)	y
PRIMUS 001	Kathryn Connolly (Grampian) Asa Dahle-Smith (Tayside)	y
SCALOP-2: Systemic therapy and Chemoradiation in Advanced LOcalised Pancreatic cancer - 2	Kathryn Connolly (Grampian)	y
ACELARATE	Kathryn Connolly (Grampian)	
Artist 1	Russell Petty (Tayside)	
ESPAC-4: : European Study Group for Pancreatic Cancer - Trial 4	Neil McPhail (Highland)	
ESPAC-5F: European Study Group for Pancreatic Cancer - Trial 5F	Bassam Alkari (Grampian) Douglas Adamson (Tayside)	
PHITT	Hugh Bishop (Grampian)	