

**West of Scotland Cancer Network**

**Upper Gastro-intestinal Cancer  
Managed Clinical Network**



# **Audit Report**

**Upper GI Cancer  
Quality Performance Indicators**

**Report of the 2021 Clinical Audit Data**

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# Upper GI Quality Performance Indicators Overview

Patients diagnosed January - December 2021

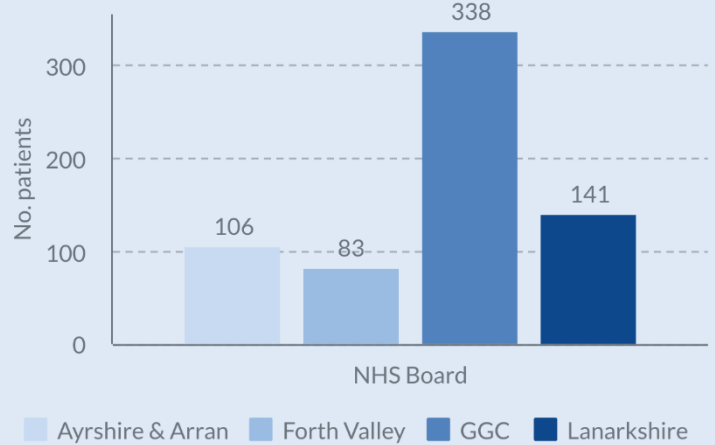
Number of patients: **668**

Gender of patients:	Male	Female
Oesophageal Cancer	71%	29%
Gastric Cancer	57%	43%

1 year Net survival*	Male	Female
Oesophageal Cancer	42%	40%
Gastric Cancer	43%	39%

\* Net non-age standardised survival for patients diagnosed 2013-17 in Scotland

## Where are patients diagnosed

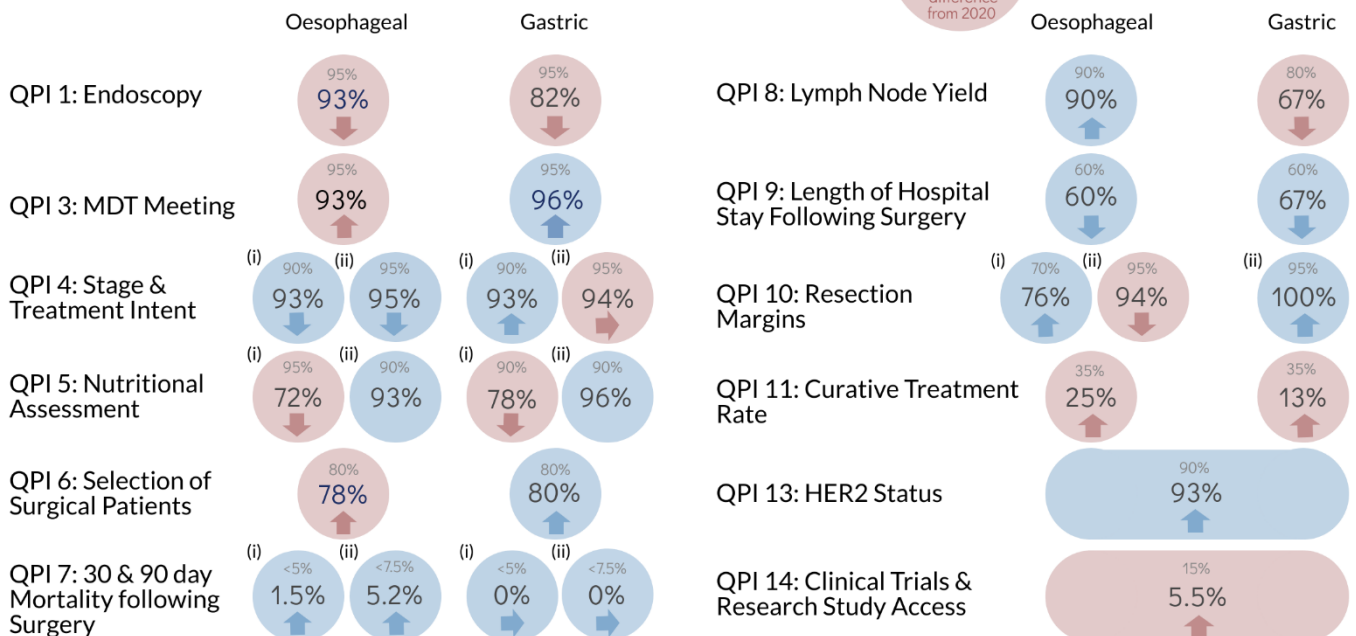


■ Oesophageal Adenocarcinoma ■ Oesophageal Squamous Cell Carcinoma ■ Gastric Adenocarcinoma ■ other

## Tumour site and morphology

## Performance (%)

Target Performance 2021  
difference from 2020



### Key Achievements:

- The revised & more challenging QPI 5ii was met
- Considerable improvement in performance against QPI 13, increasing from 65% in 2020 to 93% in 2021

### Areas for Improvement:

- Reinvigoration of Endoscopic Improvement Plan following COVID-19 pandemic
- Improvements in recording of MUST scores

## **EXECUTIVE SUMMARY**

### **Introduction**

This report presents an assessment of performance of West of Scotland (WoS) Upper Gastro-intestinal (GI) Cancer Services relating to patients diagnosed in the region between 01 January and 31 December 2021. Data was measured against v4.0 of the Upper GI Cancer Quality Performance Indicators (QPIs)<sup>1</sup>. This was the ninth consecutive year of analysis following the initial Healthcare Improvement Scotland (HIS) publication of Upper GI cancer QPIs in 2012.

In order to ensure the success of the Cancer QPIs in driving quality improvement in cancer care, QPIs will continue to be assessed and amended to ensure they remain clinically effective and relevant. Formal reviews of the Upper GI QPIs took place in 2017 and 2020. These clinically led reviews involve key clinicians from each of the Regional Cancer Networks. v4.0 changes made at the review in 2020 are all included within this report for the first time. The next review of the QPIs will commence in autumn 2022.

### **Results**

A summary of performance against the Upper GI cancer QPIs for patients diagnosed in 2021 is presented below, with more detailed analysis of the results set out in the main report. Data are analysed by location of diagnosis with the exception of surgical QPIs, which are reported by the NHS Board within which surgery was undertaken.

## Performance Summary Report

Oesophageal Cancer	Target	Year	A&A	FV	GGC	Lan	WoSCAN
<b>QPI 1: Endoscopy</b>  Proportion of patients with oesophageal cancer who have a histological diagnosis made within 6 weeks of initial endoscopy and biopsy.	95%	2021	87.0%	93.8%	93.9%	95.4%	93.2%
		2020	94.8%	98.1%	93.8%	93.5%	94.5%
		2019	95.2%	90.2%	91.7%	95.0%	92.6%
<b>QPI 3: MDT Meeting</b>  Proportion of patients with oesophageal cancer who are discussed at MDT meeting before definitive treatment.	95%	2021	90.8%	98.5%	92.3%	91.6%	92.7%
		2020	89.5%	91.1%	92.6%	77.3%	88.6%
		2019	96.7%	96.1%	95.5%	94.9%	95.6%
<b>QPI 4 (i): Staging and Treatment Intent</b>  Proportion of patients with oesophageal cancer who have (i) TNM stage recorded at MDT meeting prior to treatment.	90%	2021	94.8%	95.6%	91.6%	91.9%	92.6%
		2020	93.3%	98.2%	96.6%	88.2%	94.4%
		2019	96.9%	98.1%	95.2%	81.5%	93.3%
<b>QPI 4 (ii): Staging and Treatment Intent</b>  Proportion of patients with oesophageal cancer who have (ii) treatment intent recorded at MDT meeting prior to treatment.	95%	2021	98.7%	92.6%	93.4%	95.5%	94.5%
		2020	98.3%	100.0%	95.1%	96.8%	96.6%
		2019	98.4%	96.2%	95.2%	97.5%	96.2%
<b>QPI 5 (i): Nutritional Assessment</b>  Proportion of patients with oesophageal cancer who undergo nutritional screening with the MUST before first treatment.	95%	2021	74.0%	70.6%	72.3%	68.5%	71.5%
		2020	71.2%	80.4%	77.1%	89.2%	79.4%
		2019	76.6%	69.8%	83.5%	87.7%	81.6%
<b>QPI 5(ii): Nutritional Assessment</b>  Proportion of patients with oesophageal cancer at high risk of malnutrition (MUST Score or 2 or more) who are assessed by a dietitian.	90%	2021	97.2%	100.0%	87.4%	95.2%	92.8%
		2020					
		2019					

Oesophageal Cancer	Target	Year	A&A	FV	GGC	Lan	WoSCAN
<b>QPI 6: Appropriate Selection of Surgical Patients</b>  Proportion of patients with oesophageal cancer who receive neo-adjuvant chemotherapy or chemoradiotherapy who then go on to have surgical resection.	80%	2021	83.3%	84.6%	71.1%	100.0%	78.4%
		2020	-	77.8%	67.6%	80.0%	72.5%
		2019	85.7%	77.8%	63.6%	37.5%	66.7%
<b>QPI 7 (a)*: 30 day Mortality Following Surgery</b>  Proportion of patients with oesophageal cancer who die within 30 days of surgical resection.	< 5%	2021	0.0%	-	0.0%	8.3%	1.5%
		2020	-	-	0.0%	0.0%	0.0%
		2019	0.0%	-	4.8%	-	3.4%
<b>QPI 7 (b)*: 90 day Mortality Following Surgery</b>  Proportion of patients with oesophageal cancer who die within 90 days of surgical resection.	< 7.5%	2021	0.0%	-	4.9%	9.1%	5.2%
		2020	-	-	3.0%	0.0%	2.4%
		2019	0.0%	-	5.4%	-	3.8%
<b>QPI 8*: Lymph Node Yield</b>  Proportion of patients with oesophageal cancer who undergo surgical resection where ≥15 lymph nodes are resected and pathologically examined.	90%	2021	100.0%	-	90.6%	84.6%	90.3%
		2020	-	-	80.0%	100.0%	84.8%
		2019	100.0%	-	74.4%	-	78.0%
<b>QPI 9*: Length of Hospital Stay Following Surgery</b>  Proportion of patients undergoing surgical resection for oesophageal cancer who are discharged within 14 days of surgical procedure.	60%	2021	50.0%	-	58.5%	69.2%	59.7%
		2020	71.4%	-	61.5%	-	62.2%
		2019	55.6%	-	52.1%	28.6%	50.0%
<b>QPI 10 (i)*: Resection Margins</b>  Proportion of patients with oesophageal cancer who undergo surgical resection in which surgical margin is clear of tumour, i.e. negative surgical margin (i) circumferential	70%	2021	83.3%	-	77.4%	69.2%	76.4%
		2020	-	-	80.0%	42.9%	73.9%
		2019	61.5%	-	83.7%	-	79.7%
<b>QPI 10 (ii)*: Resection Margins</b>  Proportion of patients with oesophageal cancer who undergo surgical resection in which surgical margin is clear of tumour, i.e. negative surgical margin (ii) longitudinal	95%	2021	100.0%	-	94.3%	92.3%	94.4%
	90%	2020	-	-	94.3%	100.0%	95.7%
		2019	100.0%	-	97.7%	-	98.3%

Oesophageal Cancer	Target	Year	A&A	FV	GGC	Lan	WoSCAN
<b>QPI 11: Curative Treatment Rates</b> Proportion of patients with oesophageal cancer who undergo curative treatment.	35%	2021	14.3%	30.9%	29.2%	19.8%	25.2%
		2020	10.2%	28.6%	22.9%	17.2%	20.6%
		2019	26.6%	30.2%	27.4%	27.2%	27.6%
<b>QPI 13: HER2 Status for Decision Making</b> Proportion of patients with oesophageal or gastric adenocarcinoma undergoing first line palliative chemotherapy as their initial treatment for whom the HER2 status is reported prior to commencing treatment.	90%	2021	100.0%	80.0%	88.9%	100.0%	93.2%
		2020	77.8%	-	68.2%	47.1%	65.4%
		2018					
<b>QPI 14: Clinical Trials &amp; Research Study Access</b> Proportion of patients diagnosed with <b>Upper GI cancer</b> who are consented for a clinical trial / research study.	15%	2021	3.8%	2.4%	7.0%	4.7%	5.5%
		2020	0.0%	2.4%	3.5%	3.3%	2.8%
		2019	2.9%	3.4%	4.2%	1.3%	3.3%

Gastric Cancer	Target	Year	A&A	FV	GGC	Lan	WoSCAN
<b>QPI 1: Endoscopy</b> Proportion of patients with gastric cancer who have a histological diagnosis made within 6 weeks of initial endoscopy and biopsy.	95%	2021	76.0%	91.7%	77.6%	89.7%	81.5%
		2020	88.9%	100.0%	90.5%	94.1%	91.9%
		2019	96.8%	92.3%	95.3%	94.3%	95.2%
<b>QPI 3: MDT Meeting</b> Proportion of patients with gastric cancer who are discussed at MDT meeting before definitive treatment.	95%	2021	100.0%	100.0%	93.8%	95.8%	96.1%
		2020	92.6%	90.9%	87.9%	87.1%	88.9%
		2019	100.0%	100.0%	92.5%	91.2%	94.3%
<b>QPI 4 (i): Staging and Treatment Intent</b> Proportion of patients with gastric cancer who have (i) TNM stage recorded at MDT meeting prior to treatment.	90%	2021	100.0%	93.3%	90.6%	93.3%	93.5%
		2020	96.6%	91.7%	89.7%	94.3%	92.4%
		2019	96.9%	100.0%	91.4%	80.6%	90.9%
<b>QPI 4 (ii): Staging and Treatment Intent</b> Proportion of patients with gastric cancer who have (ii) treatment intent recorded at MDT meeting prior to treatment.	95%	2021	89.7%	100.0%	96.9%	90.0%	94.2%
		2020	100.0%	91.7%	89.7%	97.1%	93.8%
		2019	100.0%	100.0%	94.6%	91.7%	95.5%

Gastric Cancer	Target	Year	A&A	FV	GGC	Lan	WoSCAN
<b>QPI 5 (i): Nutritional Assessment</b>  Proportion of patients with gastric cancer who undergo nutritional screening with the MUST before first treatment.	95%	2021	65.5%	60.0%	81.3%	93.3%	78.3%
		2020	60.7%	33.3%	86.8%	94.3%	79.0%
		2019	62.5%	53.3%	84.9%	86.1%	78.4%
<b>QPI 5 (ii): Nutritional Assessment</b>  Proportion of patients with gastric cancer at high risk of malnutrition (MUST Score or 2 or more) who are assessed by a dietitian.	90%	2021	100.0%	-	89.5%	100.0%	95.7%
		2020					
		2019					
<b>QPI 6: Appropriate Selection of Surgical Patients</b>  Proportion of patients with gastric cancer who receive neo-adjuvant chemotherapy or chemoradiotherapy who then go on to have surgical resection.	80%	2021	-	-	80.0%	-	80.0%
		2020	-	-	66.7%	-	72.7%
		2019	-	-	75.0%	-	73.3%
<b>QPI 7 (a)*: 30 day Mortality Following Surgery</b>  Proportion of patients with gastric cancer who die within 30 days of surgical resection.	< 5%	2021	-	-	0.0%	-	0.0%
		2020	-	-	0.0%	-	0.0%
		2019	-	-	0.0%	-	0.0%
<b>QPI 7 (b)*: 90 day Mortality Following Surgery</b>  Proportion of patients with gastric cancer who die within 90 days of surgical resection.	< 7.5%	2021	-	-	0.0%	-	0.0%
		2020	-	-	0.0%	-	0.0%
		2019	-	-	0.0%	-	0.0%
<b>QPI 8*: Lymph Node Yield</b>  Proportion of patients with gastric cancer who undergo surgical resection where ≥15 lymph nodes are resected and pathologically examined.	80%	2021	-	-	61.5%	-	66.7%
		2020	-	-	100.0%	-	100.0%
		2019	-	-	84.6%	-	90.0%
<b>QPI 9*: Length of Hospital Stay Following Surgery</b>  Proportion of patients undergoing surgical resection for gastric cancer who are discharged within 14 days of surgical procedure.	60%	2021	-	-	69.2%	-	66.7%
		2020	-	-	90.0%	-	81.8%
		2019	-	-	63.6%	80.0%	68.4%



Gastric Cancer	Target	Year	A&A	FV	GGC	Lan	WoSCAN
<b>QPI 10 (ii)*: Resection Margins</b>  Proportion of patients with gastric cancer who undergo surgical resection in which surgical margin is clear of tumour, i.e. negative surgical margin (ii) longitudinal	95%	2021	-	-	100.0%	-	100.0%
		2020	-	-	90.0%	-	92.9%
	90%	2019	-	-	100.0%	100.0%	100.0%
<b>QPI 11: Curative Treatment Rates</b>  Proportion of patients with gastric cancer who undergo curative treatment.	35%	2021	3.4%	20.0%	18.8%	6.7%	13.0%
		2020	0.0%	0.0%	19.1%	11.4%	11.9%
		2019	9.4%	13.3%	15.1%	16.7%	14.2%

*QPIs reported by Board of Diagnosis with the exception of those marked \* which are reported by Board of Surgery.*

## Conclusions and Action Required:

The results presented within this report illustrate that some of the QPI targets set have been challenging for NHS Boards to achieve and there remains room for further service improvement. Where QPI targets were not met, NHS Boards have provided detailed comment. In the main these indicate valid clinical reasons or that, in some cases, patient choice or co-morbidities have influenced patient management. Additionally, NHS Boards have indicated where positive action has already been taken at a local level to address any issues highlighted through the QPI data analysis. It is anticipated that these positive changes will result in improved performance going forward.

NHS Boards are encouraged to continue with this proactive approach of reviewing data and addressing issues as necessary, in order to work towards increasingly advanced performance against targets, and demonstration of overall improvement in quality of the care and service provided to patients.

Key points of note that we have seen are:

- In 2021 numbers of patients and performance against some QPIs has recovered following a decline during 2020 due to the COVID-19 pandemic impact on Upper GI cancer services (QPI 11, curative treatment rates, and QPI 14, clinical trials and research study access)
- Low levels of mortality following surgical resection.
- Excellent performance against the new, more challenging QPI 5ii indicates that WoSCAN are providing good nutritional support to patients where need has been identified.
- Considerable improvements in the timely reporting of HER2 Status (QPI 13).

Some QPIs have aspirational targets, for example QPI 11 - curative treatment rate. Whilst some small incremental improvement may be seen, without significant investment in early detection this target will remain challenging.

There are ongoing challenges in ensuring that patients have a timely histological diagnosis following endoscopy (QPI 1). Endoscopic services for all but emergency and essential procedures were paused during the initial stages of the COVID-19 pandemic, putting pressure on the service and resulting in some patients having delays to repeat endoscopy. An Endoscopic Improvement Plan was rolled out through the region during the COVID-19 pandemic however the impact of this plan on performance has been hard to assess due to the concurrent disruptions there have been to endoscopy services caused by the pandemic. As endoscopy services start to return to normal following the COVID-19 pandemic it is timely to relaunch the endoscopy improvement plan across the region, to ensure ongoing improvements in timely diagnosis of patients at endoscopy.

Actions identified within this report to improve provision of Upper GI cancer services across the WoS are collated below.

### Actions required:

- All NHS Boards across the WoS to relaunch the Endoscopy Quality Improvement Plan to ensure ongoing improvements in the timely histological diagnosis of patients.
- All NHS Boards across the WoS to explore documentation solutions and identify a single point for recording MUST score early in the patient pathway, for example as a mandatory field in electronic patient records, mandatory field for MDT referral or a stamp for clinic notes.

NHS Boards are asked to develop local Action/Improvement Plans in response to the findings presented in the report. **Completed Action Plans should be returned to WoSCAN within two months of publication of this report.**

Please note actions have been categorised into groupings (for example surgery, oncology, pathology or data capture) for internal management purposes to allow regional trends to be identified and co-ordinate regional actions across multiple tumour groups where appropriate.

Progress against these plans will be monitored by the MCN Advisory Board and any service or clinical issue which the Advisory Board considers not to have been adequately addressed will be escalated to the NHS Board Territorial Lead Cancer Clinician and Regional Lead Cancer Clinician. Additionally, progress will be reported annually to the Regional Cancer Advisory Group (RCAG) by NHS Board Territorial Lead Cancer Clinicians and MCN Clinical Leads, and nationally on a three-yearly basis to Healthcare Improvement Scotland as part of the governance processes set out in CEL 06 (2012).

## 1. Introduction

This report presents an assessment of performance of the West of Scotland (WoS) Upper Gastro-intestinal (GI) Cancer Services relating to patients diagnosed in the region between 1<sup>st</sup> January and 31<sup>th</sup> December 2021. These audit data underpin much of the regional development/service improvement work of the Managed Clinical Network (MCN) and regular reporting of activity and performance is a fundamental requirement of an MCN to assure the quality of care delivered across the region. This was the ninth consecutive year of analysis following the initial Healthcare Improvement Scotland (HIS) publication of Upper GI Cancer QPIs in 2012.

In order to ensure the success of the Cancer QPIs in driving quality improvement in cancer care, QPIs will continue to be assessed and amended to ensure they remain clinically effective and relevant. Formal reviews of the Upper GI QPIs took place in 2017 and 2020. These clinically led reviews involve key clinicians from each of the Regional Cancer Networks. v4.0 changes made at the review in 2020 are all included within this report for the first time. The next review of the QPIs will commence imminently.

## 2. Background

Four NHS Boards across the WoS serve the 2.5 million population. There were 668 new cases of Upper GI cancer diagnosed in the WoS in 2021 (530 oesophageal cancer diagnoses and 138 gastric cancer diagnoses). The configuration of the Multidisciplinary Teams (MDTs) who manage and treat these patients across the region is set out below.

MDT	Constituent Hospital(s)
Ayrshire & Arran (AA)	University Hospital Crosshouse, University Hospital Ayr
Greater Glasgow and Clyde (GGC)	Royal Alexandra Hospital, Inverclyde Royal Hospital, Vale of Leven Hospital, Gartnavel General Hospital, Glasgow Royal Infirmary, Stobhill Hospital, Queen Elizabeth University Hospital, New Victoria Hospital
Forth Valley (FV)	Forth Valley Royal Hospital
Lanarkshire (Lan)	University Hospital Wishaw, University Hospital Monklands, University Hospital Hairmyres

Patients from Forth Valley requiring major upper GI resection have their surgery in Glasgow Royal Infirmary. The Forth Valley surgeons are responsible for the local diagnosis, staging and follow up and are involved with the surgical resection in Glasgow.

### 2.1 National context

Oesophageal cancer is the tenth most common cancer in Scotland with 836 cases diagnosed nationally in 2020<sup>2</sup>. There has been a decrease in the incidence of oesophageal cancer from 2010 to 2020 of 17%<sup>2</sup>. Oesophageal cancer is more common in males with over two thirds of cases occurring in males in 2020.

Gastric cancer is the fourteenth most common cancer in Scotland with 598 cases diagnosed nationally in 2020<sup>2</sup>. The incidence of gastric cancer in Scotland has fallen significantly, with a 31% decrease in incidence between 2010 and 2020. As with oesophageal cancer there is a higher incidence of gastric cancer in men.

There was a 29% decrease in mortality rates for patients with gastric cancer between 2010 and 2020<sup>2</sup>. Mortality rate for oesophageal cancer decreased by 13% over this period<sup>2</sup>, however oesophageal cancer still remains the fourth most common cause of death from cancer in males and the sixth most common cause of death from cancer in females.

Survival for oesophageal and gastric cancers is low compared to other cancers however 1-year and 5-year survival is increasing<sup>4</sup>. Table 1 shows the percentage change in 1-year and 5-year survival rates for patients diagnosed in 1993-1997 compared to those diagnosed in 2013-2017.

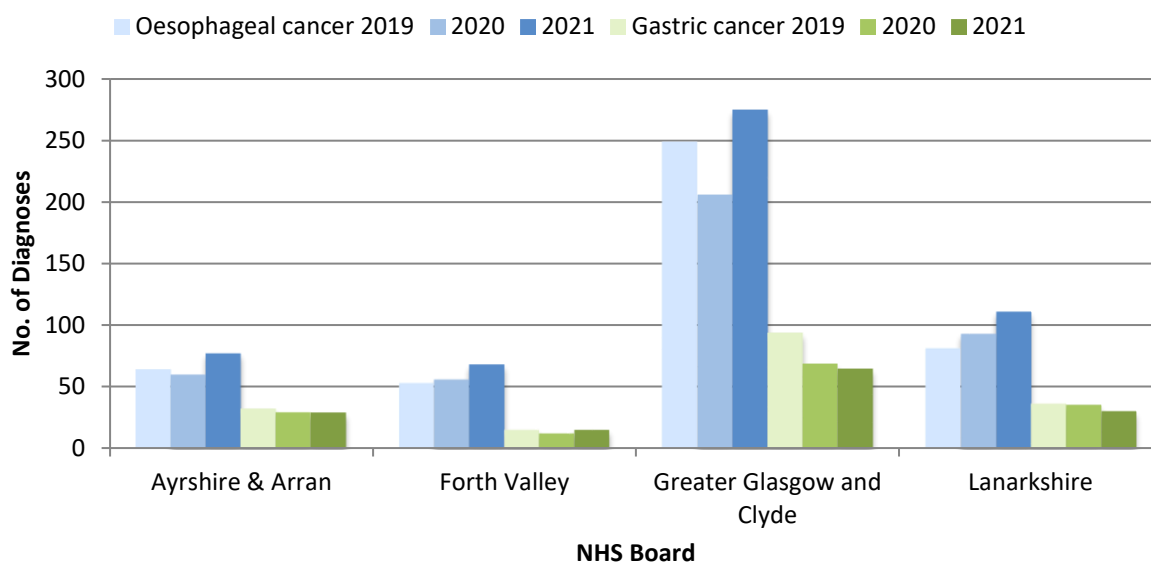
**Table 1: Net non-age-standardised survival for oesophageal and gastric cancers in Scotland at 1 year and 5 years showing percentage change from 1993-1997 to 2013-2017<sup>4</sup>**

		Net survival at 1 year (%)		Net survival at 5 years (%)	
		2013-2017	% change	2013-2017	% change
Oesophageal cancer	Male	42%	+ 13%	13%	+ 5%
	Female	40%	+ 12%	14%	+ 5%
Gastric cancer	Male	43%	+ 10%	18%	+ 6%
	Female	39%	+ 8%	17%	+ 4%

## 2.2 West of Scotland context

In 2021 there were 668 new cases of oesophagogastric cancer identified through audit as having been managed in the WoS, slightly higher than the pre-pandemic 5 year average (2015-19 average was 647 patients) following a roughly 10% decrease in numbers of patients diagnosed in 2020 is likely to have been due to the impact of the COVID-19 pandemic. The number of patients diagnosed over 2019-2021 within each MDT/NHS Board is presented in Figure 1 and broken down by the site of origin of the tumour.

**Figure 1: Number of patients diagnosed in 2019-21 with oesophageal or gastric cancer by NHS Board of diagnosis.**



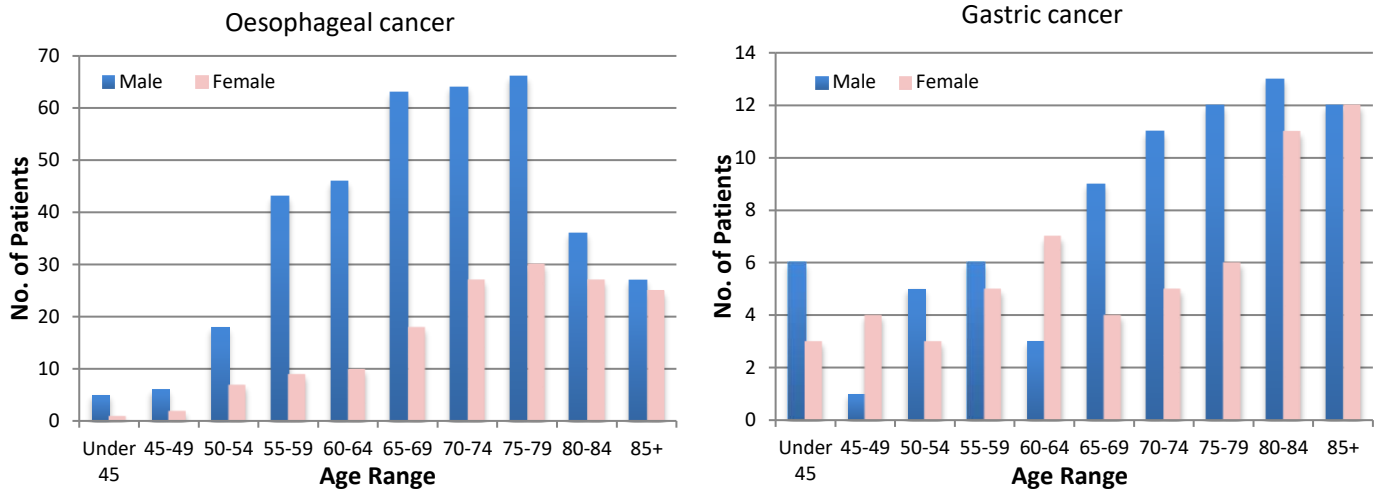
Numbers in 2021	AA	FV	GGC	Lan	WoS
Oesophageal cancer	77	68	274	111	530
Gastric cancer	29	15	64	30	138
Total	106	83	338	141	668

A breakdown of the numbers of patients by tumour morphology is provided below, oesophageal adenocarcinoma is the most commonly occurring Upper GI cancer and accounts for nearly 50% of all Upper GI cancer diagnoses in the WoS in 2021.

- 330 Oesophageal adenocarcinoma (49%)
- 160 Oesophageal squamous cell carcinoma (24%)
- 113 Gastric adenocarcinoma (17%)
- 2 Gastric squamous cell carcinoma (0.3%)
- Morphology not assessable / not recorded 63 (9%)

Figure 2 illustrates the distribution of oesophageal cancer cases by age group and gender. As with previous years data, the occurrence of both oesophageal and gastric cancer is higher in males (71% and 57% of cases respectively) than in females (29% and 43% of cases respectively).

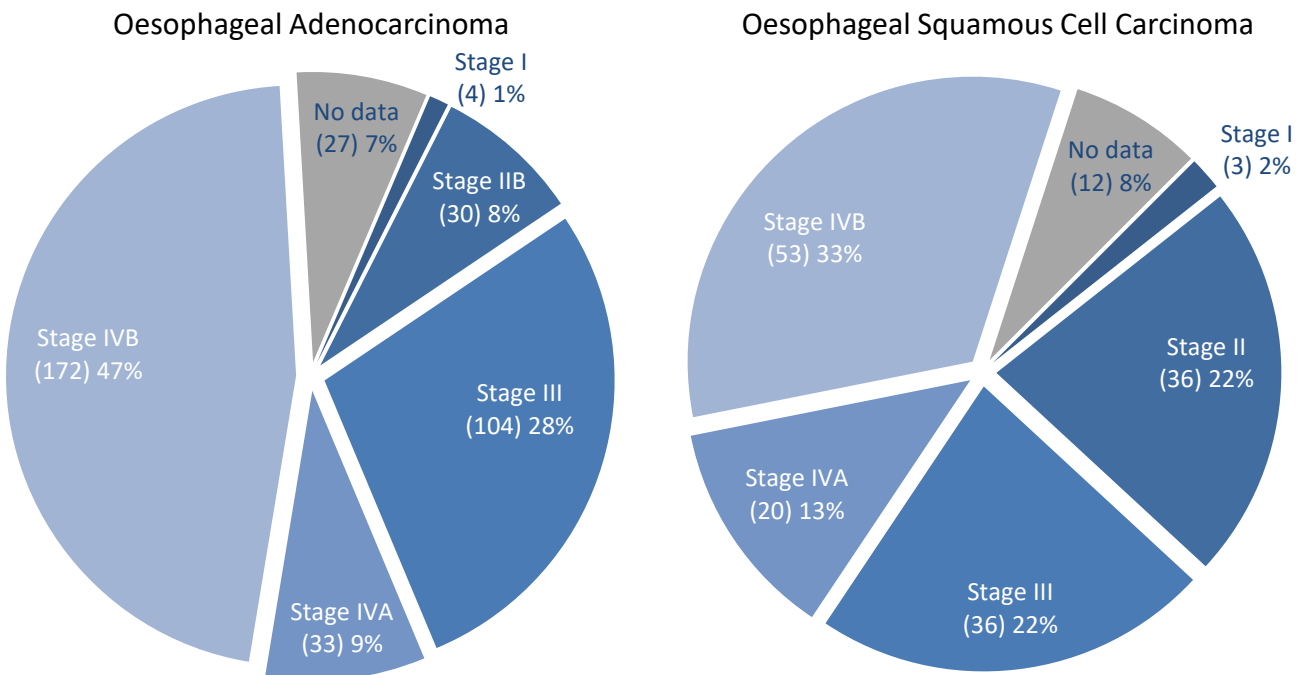
Figure 2: Number of patients diagnosed in 2021 with oesophageal and gastric cancer in WoS within each age group.



### Tumour Morphology and Stage at Diagnosis

Staging is the assessment of the extent of disease and TNM8 staging was used to stage all Upper GI cancers during 2021. Figure 3 shows the distribution of oesophageal cancers by clinical stage, indicating that most patients present with advanced disease.

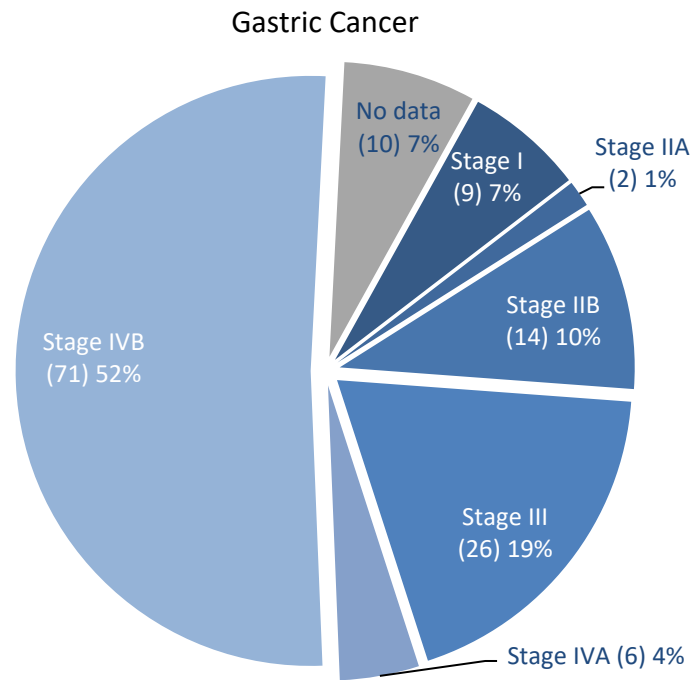
Figure 3: Clinical Stage of oesophageal adenocarcinomas and oesophageal squamous cell carcinomas for patients diagnosed in 2021



Staging could not be applied to all diagnoses as for some patients the recording of T, N and M staging was not applicable (20 patients), not fully recorded (10 patients) or was recorded as Tx or Nx (9 patients). Changes are being made to data definitions that will improve recording of TNM in patients having EMR, and this should result in more complete recording of TNM in future years.

Figure 4 shows the distribution of gastric cancers by clinical stage, again indicating the predominance of advanced stage disease. For gastric cancer 10 patients were not staged; for some patients the recording of T, N and M staging was not applicable (1 patient), not fully recorded (5 patients) or recorded as Tx or Nx (4 patients).

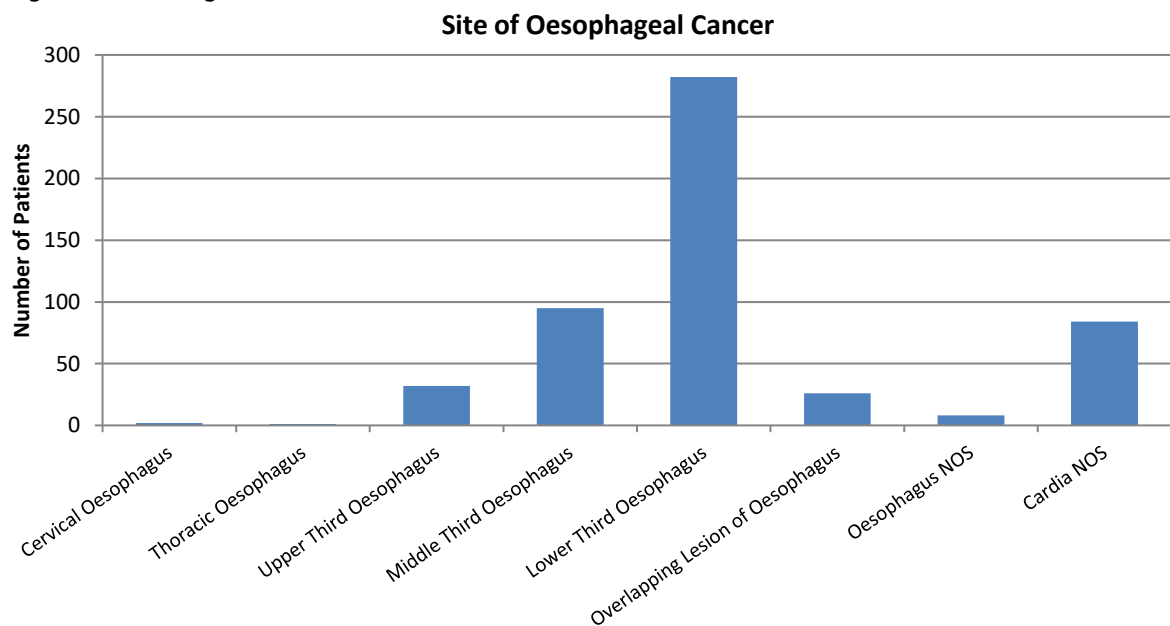
Figure 4: Clinical Stage of gastric cancers for patients diagnosed in 2021



Comparison of staging data with that for 2020 suggests that while the numbers of patients presenting with Stage IV disease was similar over the period 2019-2021, due to a decrease in the numbers of patients presenting with stage I – III disease in 2020, the proportion of patients with stage IV disease increased in 2020 and decreased to pre-pandemic levels in 2021 (2019 53%; 2020 59%; 2021 53%). Decreases in numbers of patients diagnosed with early stage disease during the COVID-19 pandemic may be due to the reductions in endoscopy services during this period.

### Site of Tumour

Figure 5: Site of origin of tumour.



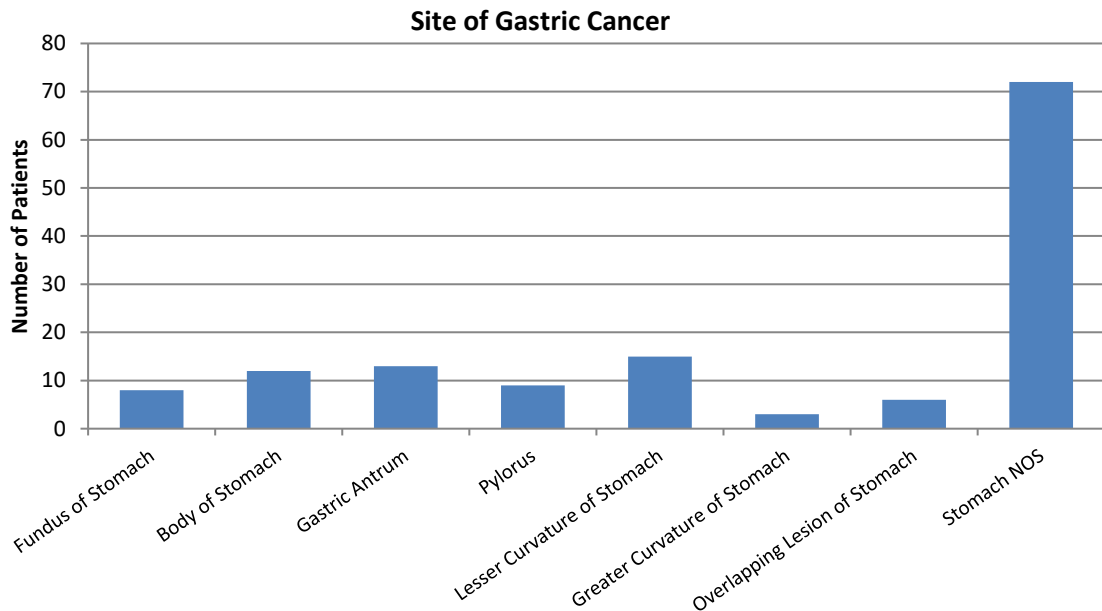


Figure 5 displays the breakdown by site of tumour for oesophageal and gastric cancer patients and illustrates that the majority (53%) of oesophageal cancers diagnosed in 2021 occurred in the lower third oesophagus while gastric cancers were more evenly distributed across different sites, with over half (52%) of gastric cancer patients not having the site of the tumour identified further (stomach NOS).

### Patient Profile

Figure 6 shows the Scottish Index of Multiple Deprivation (SIMD) 20 quintiles for patients diagnosed with Upper GI cancer; with 1 equating to the most deprived postcodes and 5 equating to the least deprived. Figure 7 shows the WHO Performance Status (PS) of patients diagnosed with Upper GI cancer, with 0 being fully active and 4 being completely disabled. It is noted that Performance Status was not recorded for 17 patients in NHS Lanarkshire (12% of patients) and 33 patients in NHSGGC (10%). From early 2021 clinical staff in NHS Lanarkshire have been discussing and recording the Performance Status at MDT routinely for all patients, which has resulted in a considerable improvement in the recording within Lanarkshire in 2021 compared with 2020 when 41% of patients did not have performance status recorded.

Figure 6: SIMD percentile for Upper GI patients

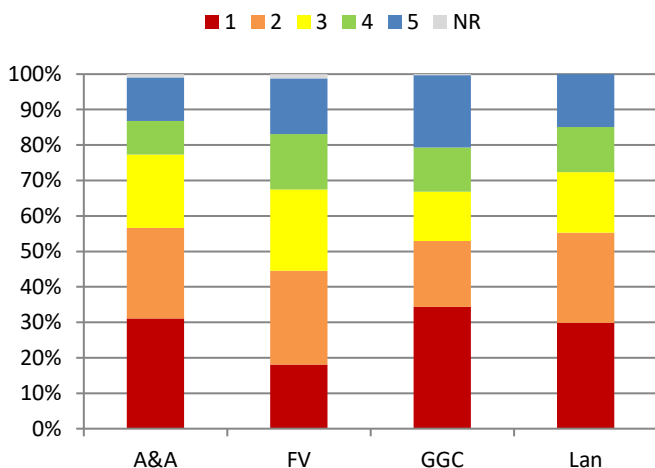
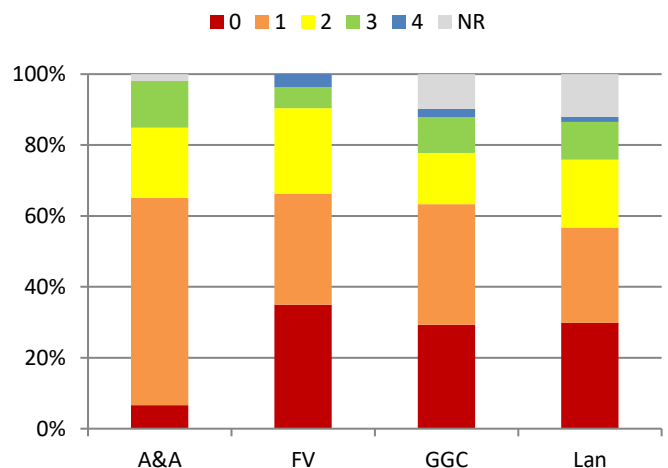


Figure 7: WHO Performance Status for Upper GI patients



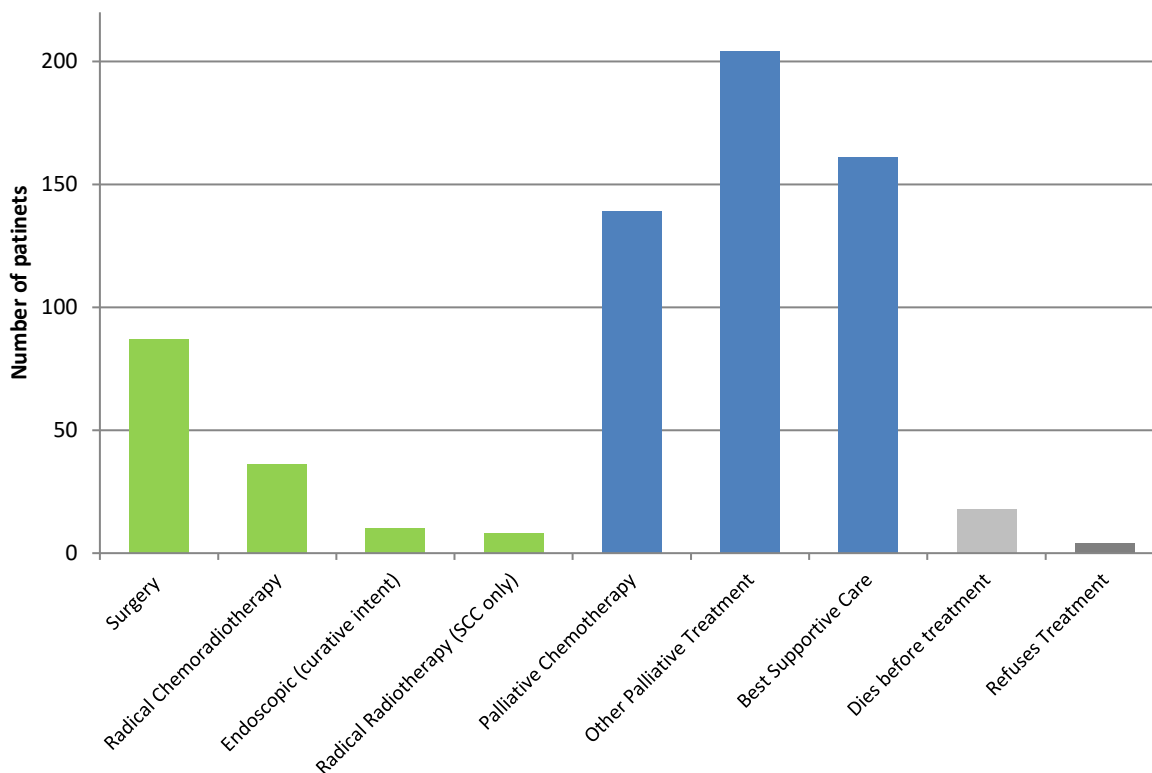
### Upper GI Cancer Treatment

Figure 8 shows the type of treatment Upper GI cancer patients receive across WoSCAN during their first episode of care following diagnosis. Overall in WoSCAN only 21% of patients received curative treatment in 2021 with the majority of patients receiving palliative treatment. This curative treatment rate is higher than in



2020 (16%) and similar to pre-COVID-19 pandemic levels in 2019 (22%). The decrease in 2020 was considered to be due to the COVID-19 pandemic, which resulted in patients presenting with more advanced stage disease in at least some WoS areas as well as affecting some treatment decisions.

Figure 8: Type of treatment for patient diagnosed with Upper GI cancer in WoSCAN.



### 3. Methodology

Further detail on the audit and analysis methodology and data quality is available in the meta data within appendix 1.

### 4. Results and Actions Required

Performance against the Upper GI Cancer QPIs are set out in the following sections. Data are presented by location of diagnosis or location of surgery and illustrate NHS Board performance against each target and overall regional performance for each performance indicator.

Where the number of cases meeting the denominator criteria for any indicator is between one and four, the percentage calculation has not been shown on any associated charts or tables. This is to avoid any unwarranted variation associated with small numbers and to minimise the risk of disclosure. Any charts or tables impacted by this are denoted with a dash (-). Any commentary provided by NHS Boards relating to the impacted indicators will however be included as a record of continuous improvement.

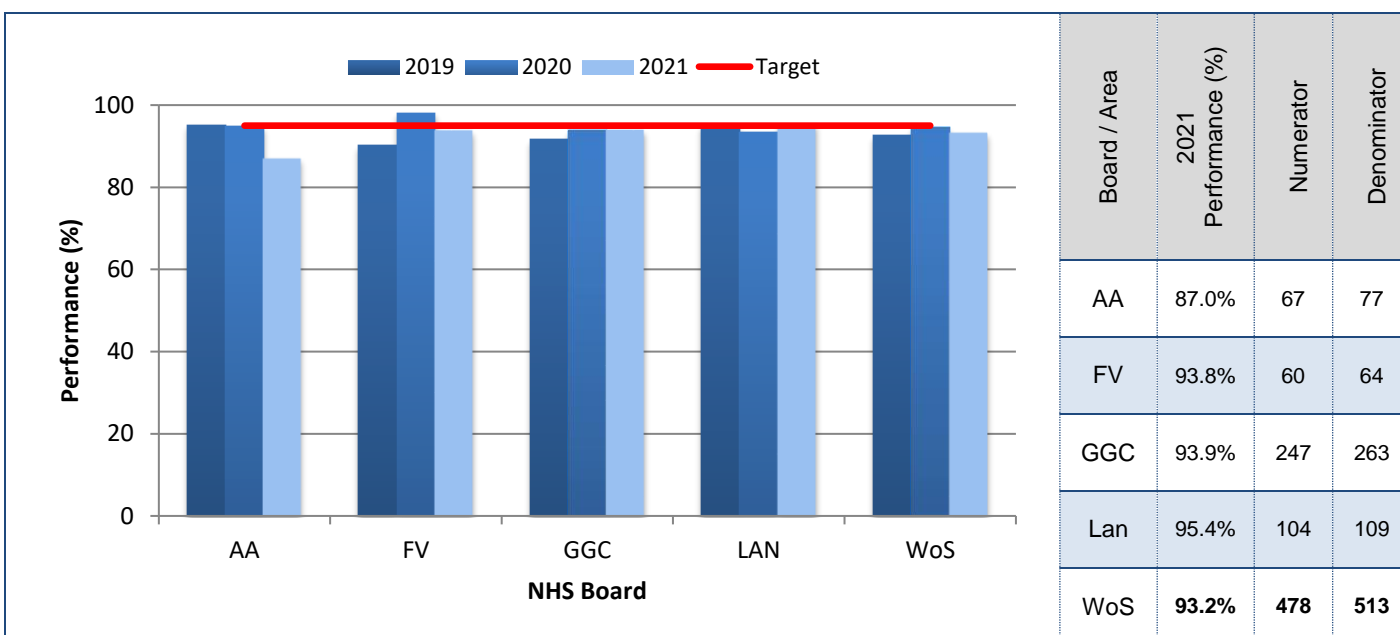
Specific regional and NHS Board actions have been identified to address issues highlighted through the data analysis.

## QPI 1: Biopsy Procedure

For diagnosis of oesophageal and gastric cancer the use of endoscopy is recommended. A tissue diagnosis in cases of suspected oesophageal and gastric cancer requires adequate sampling of the suspicious lesion. Multiple biopsies should be obtained and the number of biopsies examined should always be reported<sup>1</sup>. The tolerance within the 95% target is designed to account for factors of patient choice.

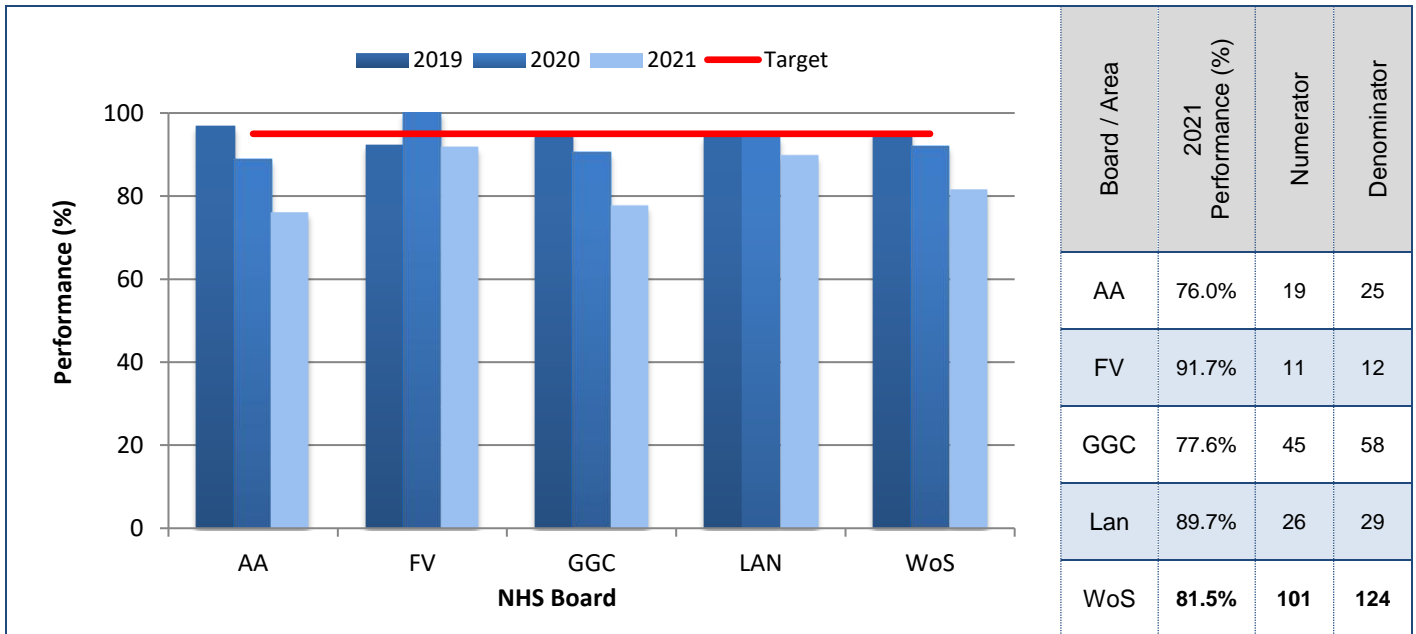
<b>QPI 1:</b>	Patients with oesophageal or gastric cancer should undergo endoscopy and biopsy to reach a diagnosis of cancer.
<b>Numerator:</b>	Number of patients with oesophageal or gastric cancer who undergo endoscopy who have a histological diagnosis made within 6 weeks of initial endoscopy and biopsy.
<b>Denominator:</b>	All patients with oesophageal or gastric cancer who undergo endoscopy.
<b>Exclusions:</b>	No exclusions.
<b>Target:</b>	95%

## Oesophageal Cancer



Of the 513 oesophageal cancer patients who underwent endoscopy, 478 had a histological diagnosis within 6 weeks of initial endoscopy and biopsy resulting in a WoS performance of 93.2%. NHS Lanarkshire achieved the target and performance was above 90% in all boards with the exception of NHS Ayrshire & Arran.

## Gastric Cancer



Overall WoS results show that 81.5% of patients with gastric cancer had a histological diagnosis within 6 weeks of initial endoscopy and biopsy; below the target of 95% and lower than the 2020 performance of 91.9%. No NHS Boards met the target set.

All NHS Boards not meeting this QPI have reviewed both oesophageal and gastric cancer patients who did not have a histological diagnosis within 6 weeks of initial endoscopy. Across the region more than half of patients not meeting the QPI did ultimately have a histological diagnosis. Endoscopic services for all but emergency and essential procedures were paused during the initial stages of the COVID-19 pandemic, putting pressure on the service and resulting in some patients having delays to repeat endoscopy. Other patients experienced longer waiting times for repeat endoscopy because of complex diagnostic pathways, while re-biopsy was not always considered to be in the patient's best interest for some patients not suitable for treatment other than supportive care.

An Endoscopic Quality Improvement Plan was instituted in NMSGGC and rolled out through the region during the COVID-19 pandemic however the impact of this plan on performance has been hard to assess due to the concurrent disruptions there have been to endoscopy services caused by the pandemic. As endoscopy services start to return to normal following the COVID-19 pandemic it is timely to relaunch the Endoscopy Quality Improvement Plan across the region to ensure ongoing improvements in the timely diagnosis of patients at endoscopy.

### Action Required:

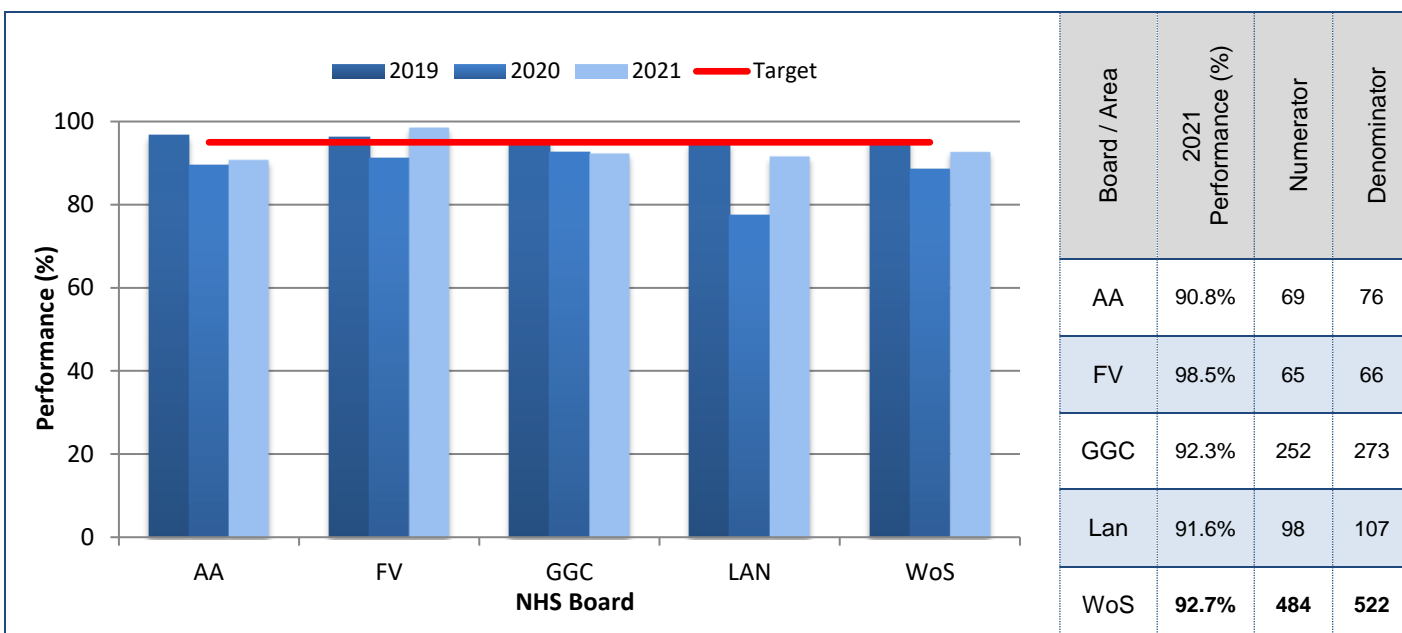
- **All NHS Boards across the WoS to relaunch the Endoscopy Quality Improvement Plan to ensure ongoing improvements in the timely histological diagnosis of patients.**

### QPI 3: MDT Discussion

Evidence suggests that patients with cancer managed by a multi-disciplinary team achieve better outcomes. There is also evidence that the multidisciplinary management of patients increases their overall satisfaction with their care<sup>1</sup>. Discussion prior to definitive treatment decisions being made provides reassurance that patients are being managed appropriately<sup>1</sup>. The tolerance within this QPI accounts for situations where patients require surgery or other intervention urgently.

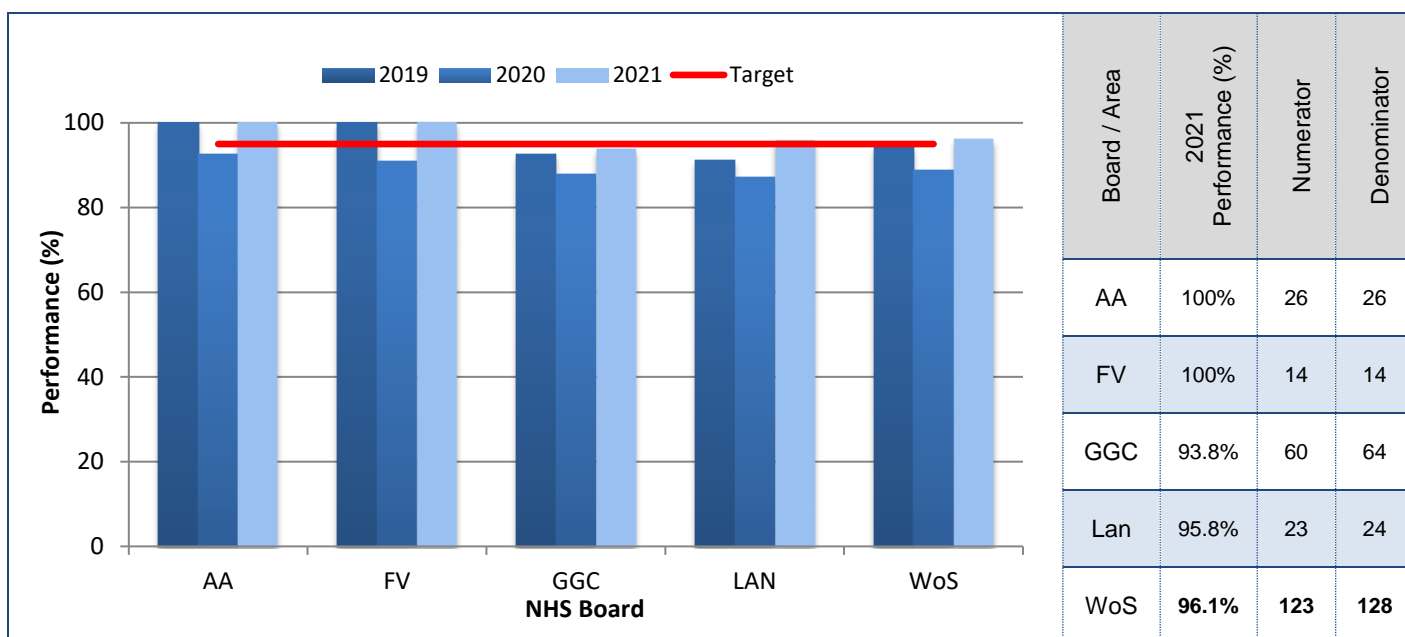
<b>QPI 3:</b>	Patients should be discussed by a multidisciplinary team prior to definitive treatment.
<b>Numerator:</b>	Number of patients with oesophageal or gastric cancer discussed at the MDT before definitive treatment.
<b>Denominator:</b>	All patients with oesophageal and gastric cancer.
<b>Exclusions:</b>	Patients who died before first treatment.
<b>Target:</b>	95%

### Oesophageal Cancer



Of the 522 patients across the region with oesophageal cancer who were measured against this QPI, 484 were discussed at MDT prior to definitive treatment. This equates to 92.7%, below the 95% QPI target. Performance in 2021 was higher than in 2020 however only NHS Forth Valley met the target.

## Gastric Cancer



Of the 128 patients with gastric cancer, 123 were recorded as having been discussed at the MDT prior to definitive treatment, resulting in a WoS performance of 96.1%. The 95% QPI target was met at a regional level in 2021 and by all NHS Boards except NHSGGC. As with oesophageal cancer patients, performance in 2021 was higher than in 2020.

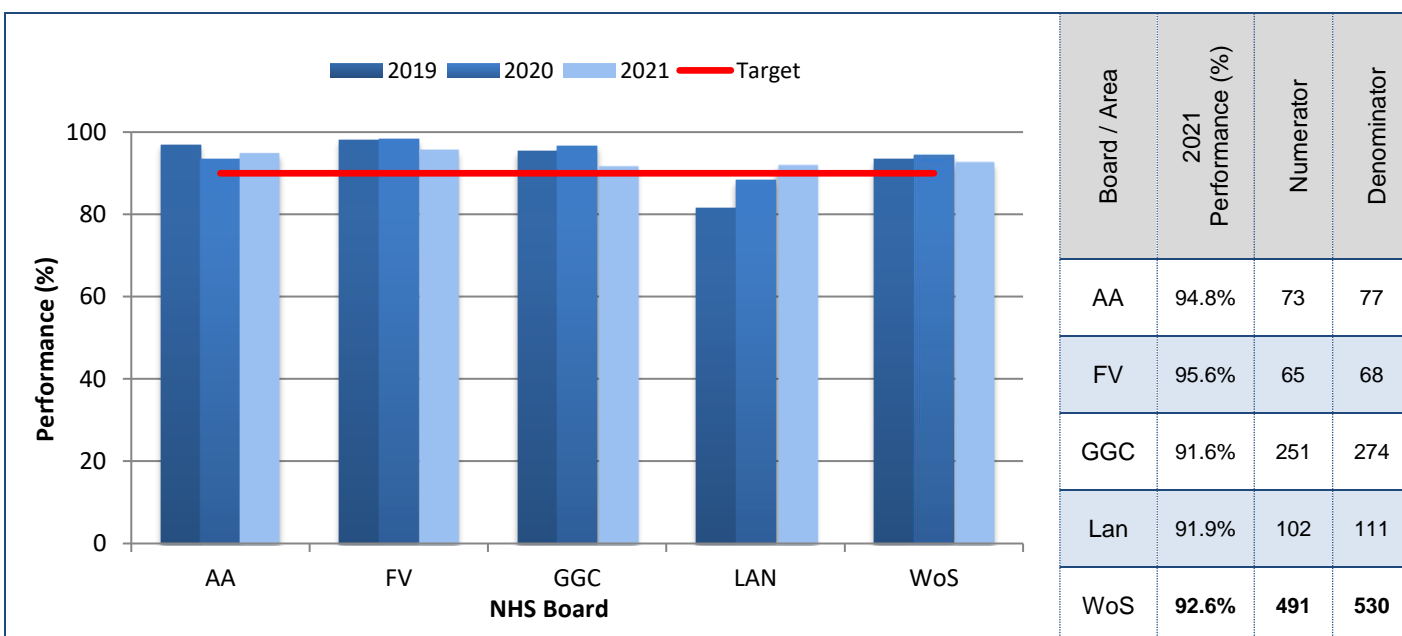
All NHS Boards reviewed both oesophageal and gastric cancer patients that were not discussed at MDT before first treatment. The vast majority of these patients received emergency stent insertion prior to MDT discussion due to the severity of symptoms experienced by the patient. The numbers of patients presenting as an emergency were thought to have increased during the COVID-19 pandemic, potentially resulting in the lower performance against this QPI in 2020 and possibly also impacting on performance in 2021. In addition some patients also died before they were discussed at MDT.

## QPI 4: Staging and Treatment Intent

Patients with gastric or oesophageal cancer should undergo careful staging to assess the extent of disease and inform treatment decision making<sup>1</sup>. A statement regarding clinical stage and treatment intent should be recorded at the MDT meeting using version 8 of the classification. For patients presenting with metastatic disease it is not always possible or appropriate to determine T and N stage. Within the QPI TxNxM1 is therefore accepted as complete staging in this situation<sup>1</sup>.

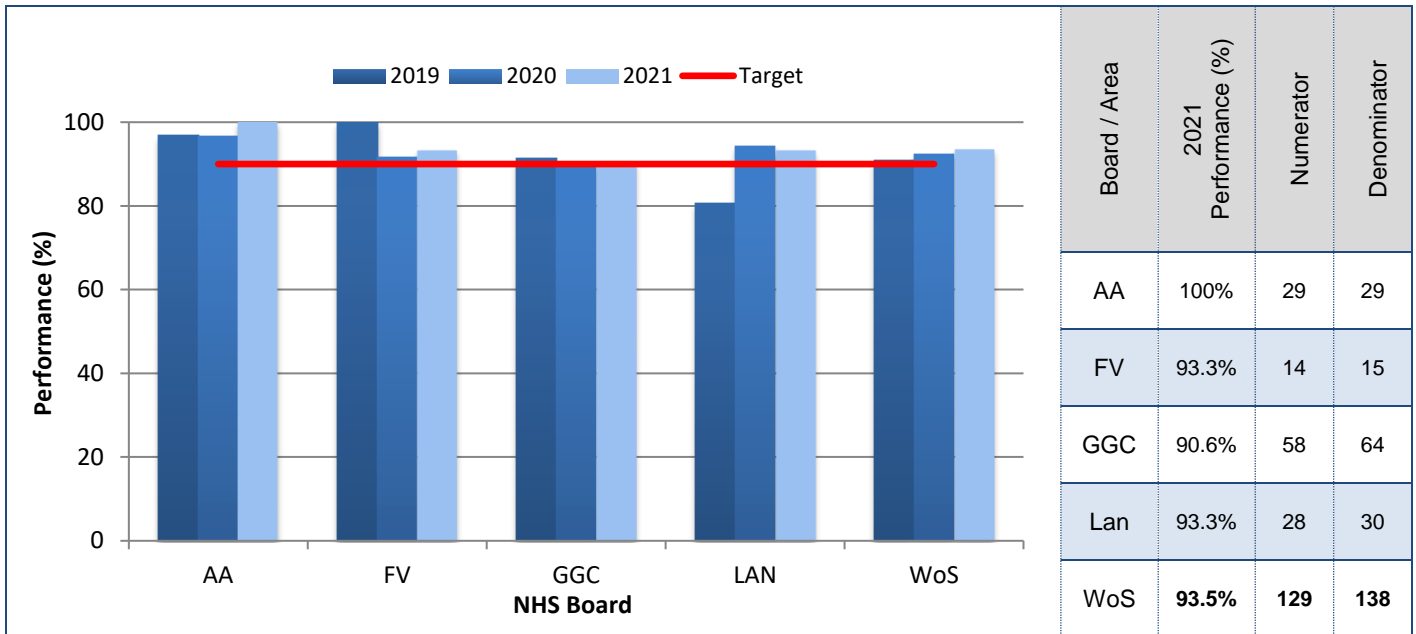
<b>QPI 4(i):</b>	Patients with oesophageal or gastric cancer should be staged using the TNM staging system and have this recorded at MDT prior to treatment commencing.
<b>Numerator:</b>	Number of patients with oesophageal or gastric cancer who have TNM stage recorded at MDT prior to treatment.
<b>Denominator:</b>	All patients with oesophageal and gastric cancer.
<b>Exclusions:</b>	No exclusions.
<b>Target:</b>	90%

### Oesophageal Cancer



Of 530 oesophageal patients, 491 had TNM stage data recorded at MDT prior to treatment with all NHS Boards achieving the 90% QPI target. NHS Lanarkshire has shown a marked improvement in performance in recent years due to the introduction of the electronic MDT system in 2020, along with radiologists adding an addendum to the radiology report after the MDT discussion to radiologically stage patients.

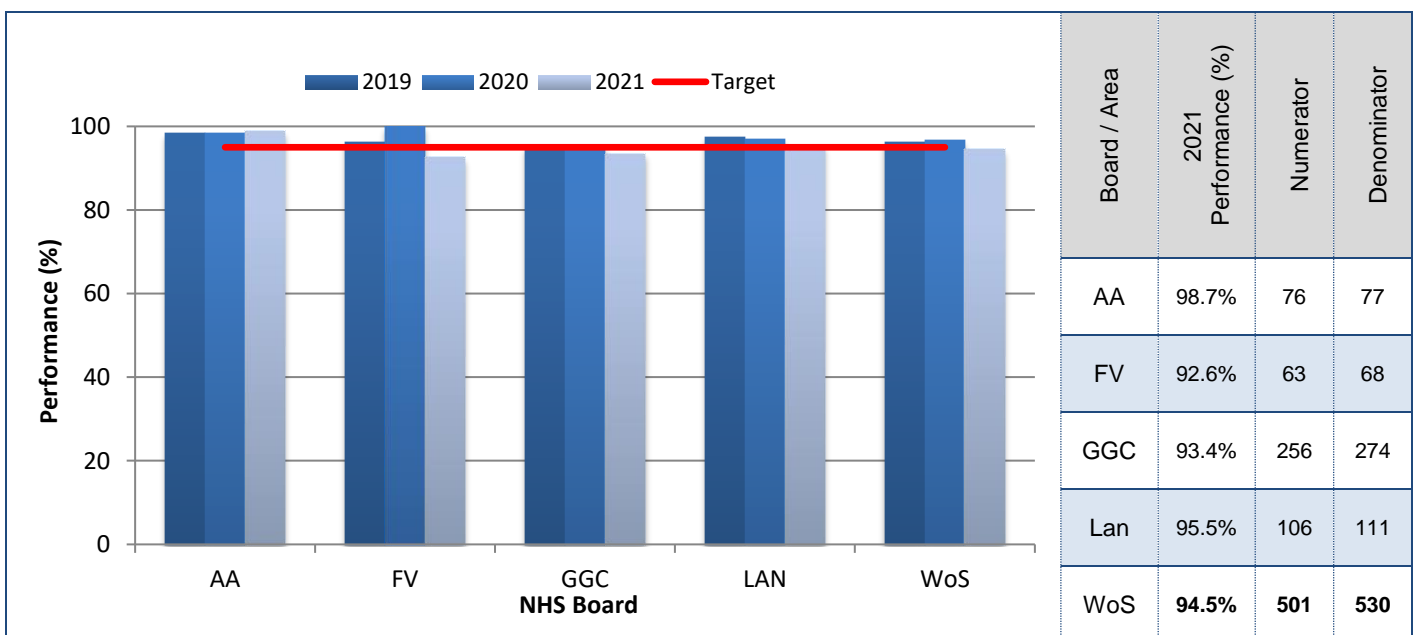
## Gastric Cancer



Overall, 129 of the 138 patients diagnosed with gastric cancer in the WoS had TNM staging recorded at MDT meeting prior to treatment, resulting in a performance of 93.5% which meets the 90% target; all NHS Boards also meet this target.

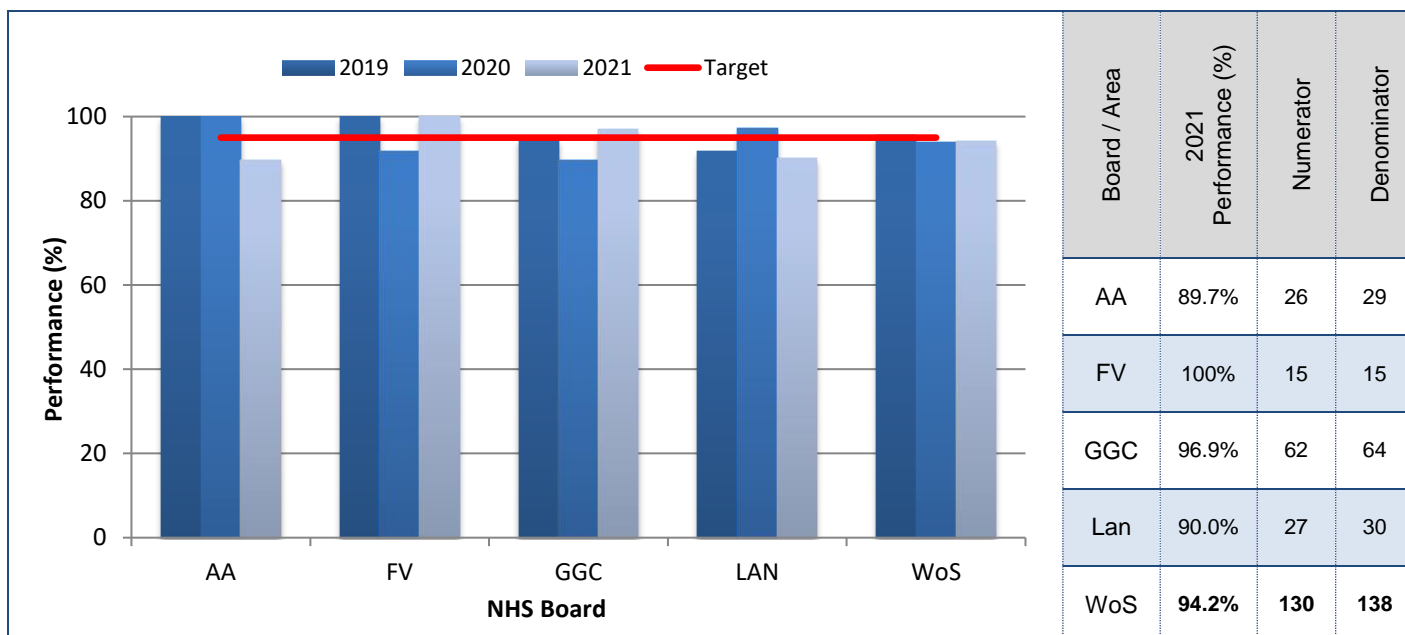
<b>QPI 4(ii):</b>	Patients with oesophageal or gastric cancer should have treatment intent recorded at MDT prior to treatment commencing.
<b>Numerator:</b>	Number of patients with oesophageal or gastric cancer who treatment intent recorded at MDT prior to treatment.
<b>Denominator:</b>	All patients with oesophageal and gastric cancer.
<b>Exclusions:</b>	No exclusions.
<b>Target:</b>	95%

## Oesophageal Cancer



Of the 530 patients diagnosed with oesophageal cancer, 501 had treatment intent recorded at MDT prior to treatment. This equates to a WoS performance of 94.5%, just missing the 95% QPI target with NHS Ayrshire & Arran and NHS Lanarkshire achieving this target.

### Gastric Cancer



Overall performance across the WoS against this indicator was below target at 94.2%, with 130 of the 138 gastric cancer patients having treatment intent recorded at MDT meeting prior to treatment. Two of the 4 NHS Boards met the 95% target.

Cases where treatment intent was not recorded were reviewed; in the majority of cases patients had either died before MDT discussion or discussion was deemed inappropriate as patients were receiving end of life care or refused investigations and treatment.

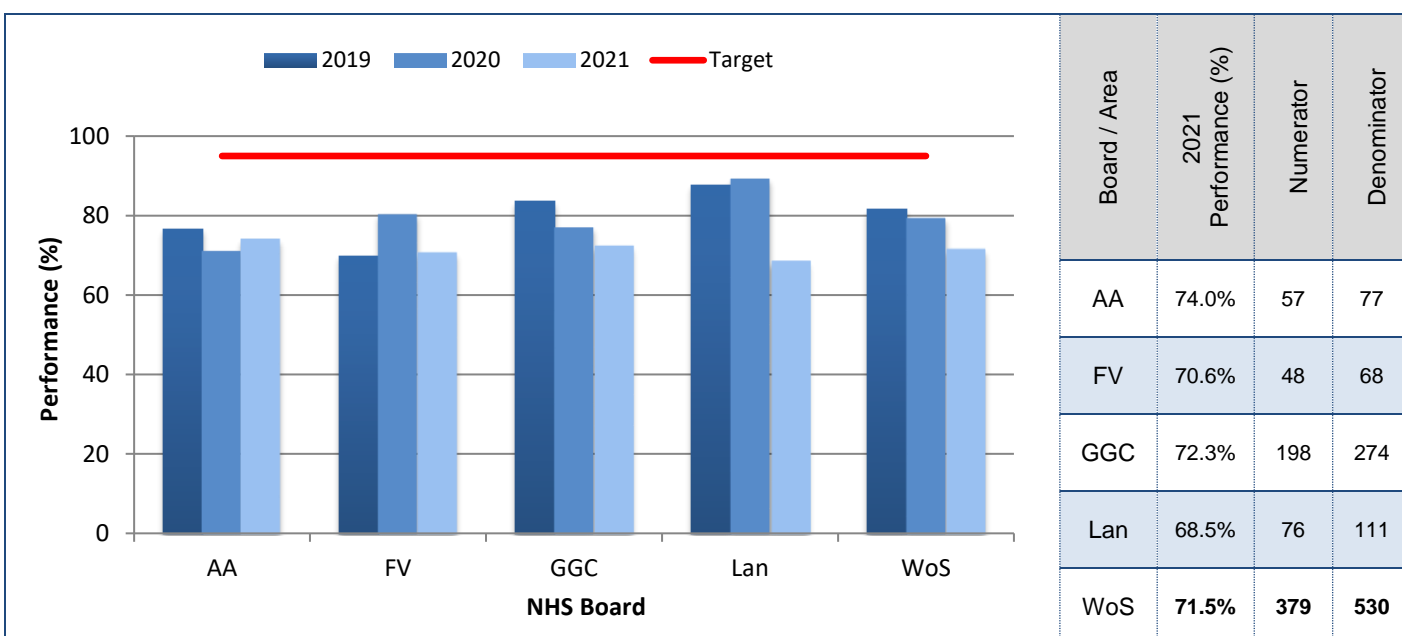


## QPI 5: Nutritional Assessment

All patients with oesophageal or gastric cancer should be screened using a validated screening tool to assess nutritional risk. Those at risk of nutritional problems should have access to a state registered dietitian to provide appropriate advice<sup>1</sup>. Poor nutritional status is a risk factor for poor tolerance of treatment and can impact greatly on quality of life. Appropriate nutritional support can help reduce complications such as sepsis, poor wound healing and reduce length of stay<sup>1</sup>.

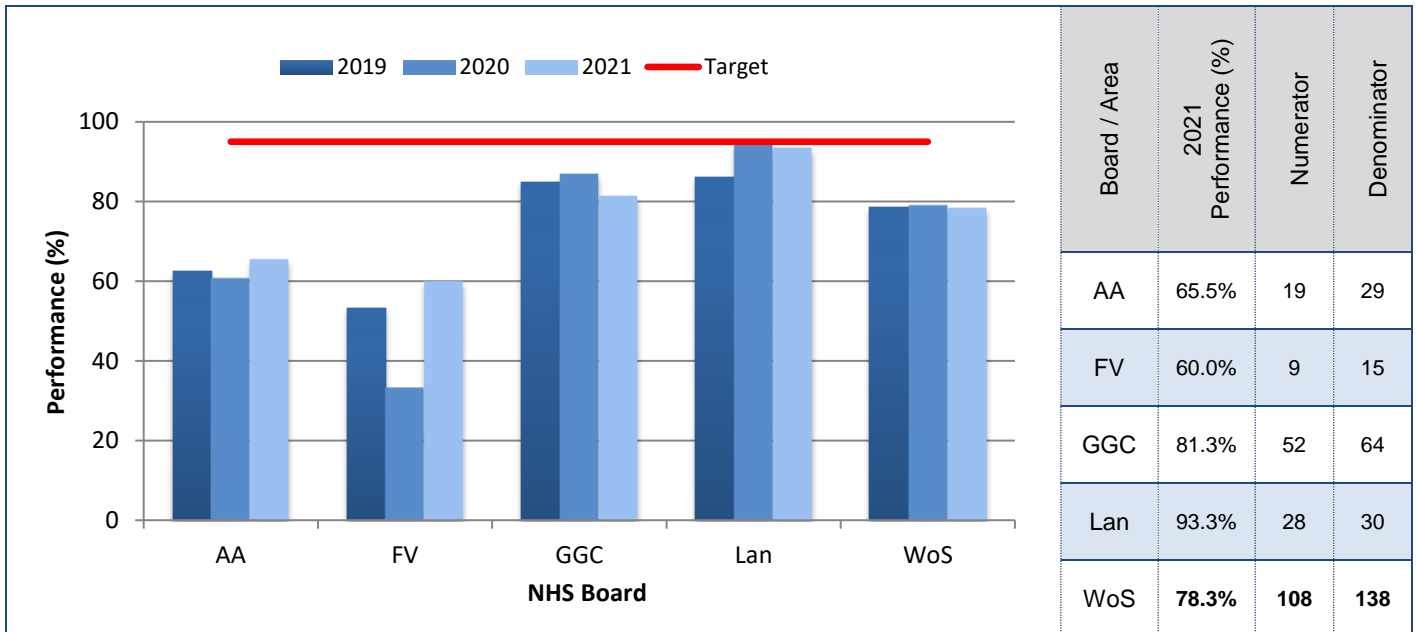
<b>QPI 5(i):</b>	Patients with oesophageal or gastric cancer should be appropriately assessed by a dietitian to optimise nutritional status.
<b>Numerator:</b>	Number of patients with oesophageal or gastric cancer who undergo nutritional screening with the MUST before first treatment.
<b>Denominator:</b>	All patients with oesophageal and gastric cancer.
<b>Exclusions:</b>	No exclusions.
<b>Target:</b>	95%

### Oesophageal Cancer



The 95% target for QPI 5 was not achieved for the third consecutive year. In the WoS 71.5% of oesophageal patients underwent nutritional screening prior to first treatment, a lower proportion than in the 2019 and 2020. No board met the target.

## Gastric Cancer



Across the WoS 78.3% of patients diagnosed with gastric cancer underwent nutrition screening prior to first treatment. No Board achieved the QPI target however performance in NHS Lanarkshire was very close to the target in 2021 and 2020.

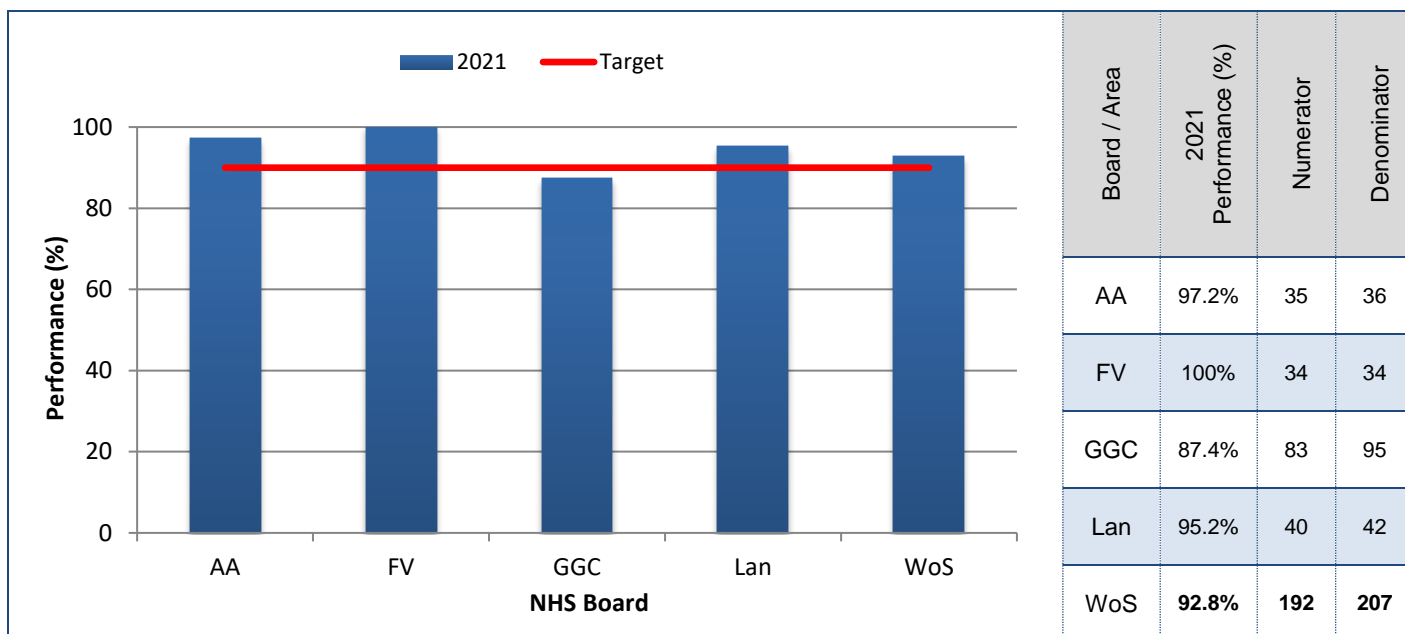
While there have been significant improvements in the recording of the Malnutrition Universal Screening Tool (MUST) scores of patients before treatment since the introduction of this QPI, performance against this measure has declined in the recent years and in 2021 more than a quarter of patients did not have a MUST score recorded before treatment. The majority of patients not meeting this QPI did not have a MUST score recorded, although a significant minority did have a MUST score recorded after treatment; some of these patients were undergoing supportive care or emergency treatment. It is likely that those patients without a MUST score recorded are largely those patients that are eating normally and have stable weight and therefore are unlikely to require referral to a dietician; never-the-less it is recognised that MUST scores should be reported for all patients as early as possible in the diagnostic process. As such all NHS Boards are working with the appropriate staff to ensure that MUST is recorded routinely, preferably at the point of first contact with patients. Some improvements have been made that should improve recording of MUST score in future years; NHSGGC are currently discussing a new dietetics pathway and NHS Lanarkshire now have administration support for the Upper GI CNS team which has enabled MUST scores to be scanned into Clinical Portal at an earlier stage and in addition the NHS Lanarkshire online dietetic referral forms now require MUST score to be recorded.

### Action Required:

- **All NHS Boards across the WoS to explore documentation solutions and identify a single point for recording MUST score early in the patient pathway, for example as a mandatory field in electronic patient records, mandatory field for MDT referral or stamp for clinic notes.**

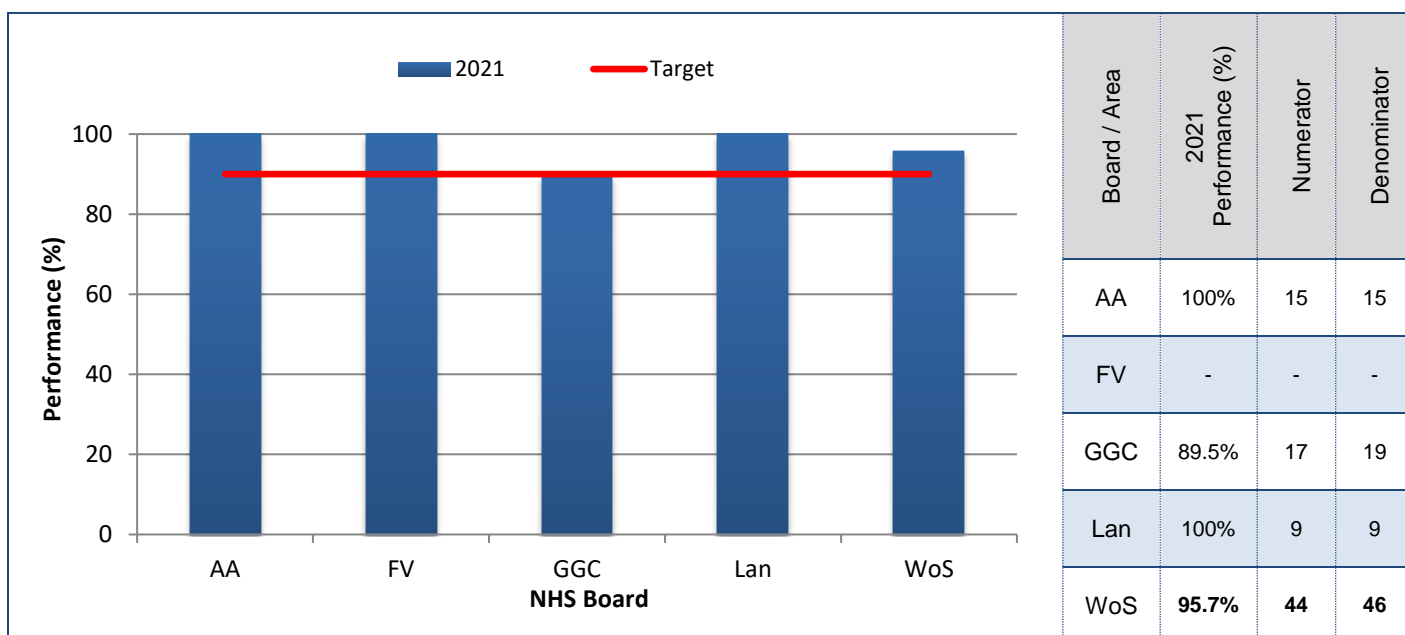
<b>QPI 5(ii):</b>	Patients with oesophageal or gastric cancer should be appropriately assessed by a dietitian to optimise nutritional status.
<b>Numerator:</b>	Number of patients with oesophageal or gastric cancer at high risk of malnutrition (MUST score of 2 or more) who are assessed by a dietitian.
<b>Denominator:</b>	All patients with oesophageal and gastric cancer at high risk of malnutrition (MUST score of 2 or more).
<b>Exclusions:</b>	No exclusions.
<b>Target:</b>	90%

## Oesophageal Cancer



Overall in the WoS of the 207 patients with oesophageal cancer at high risk of malnutrition (MUST score of 2 or more), 92.8% (192) were assessed by a dietician, achieving the 90% QPI target. All Boards within WoSCAN achieved the QPI target in 2021 except NHSGGC.

## Gastric Cancer



Across WoS, 95.7% of patients with gastric cancer at high risk of malnutrition were assessed by a dietician, meeting the 90% QPI target at a regional level and within all NHS Boards except NHSGGC; where the target was almost reached.

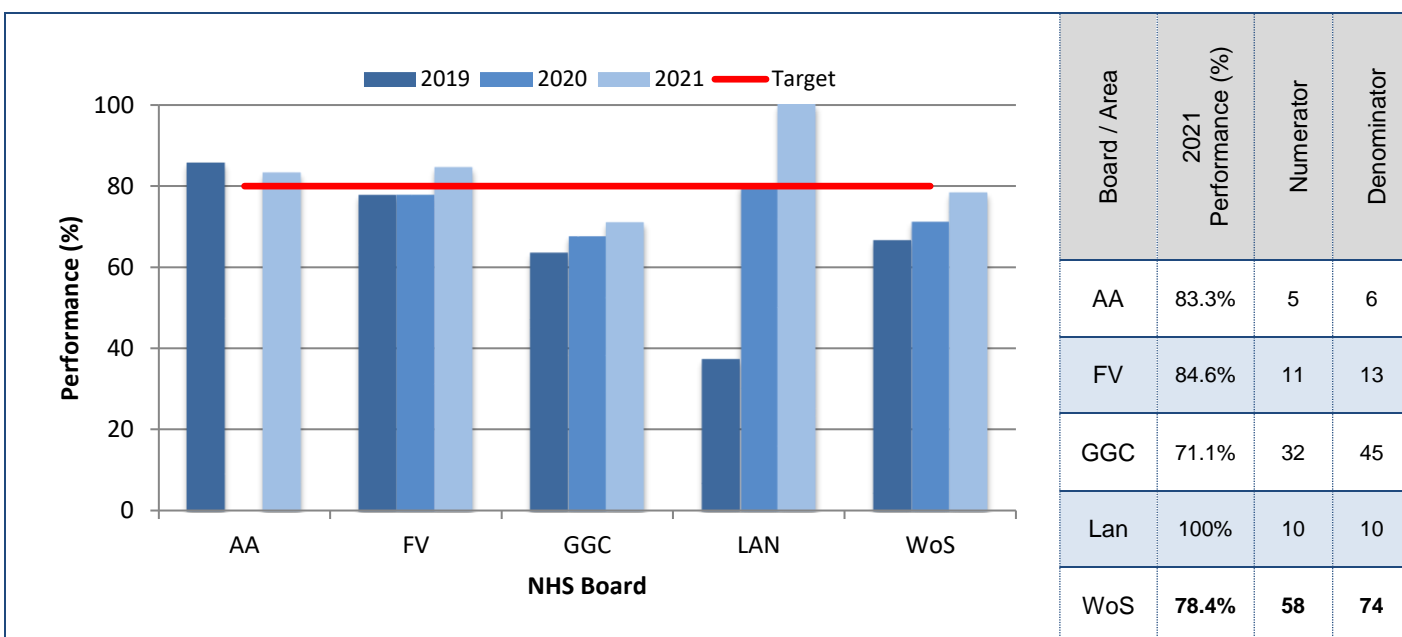
This QPI has been amended to measure the proportion of patients assessed by a dietician, rather than those simply being referred; as such there are no previous years of data with which results can be compared. Despite the QPI definition becoming more challenging it is clear that within WoSCAN patients at high risk of malnutrition are being assessed by a dietician.

## QPI 6: Appropriate Selection of Surgical Patients

Patients with oesophageal or gastric cancer who are suitable for surgical resection should be offered treatment with neoadjuvant chemotherapy or chemoradiotherapy. Neoadjuvant chemotherapy or chemoradiotherapy prior to surgery provides a survival benefit for patients with oesophageal and gastric cancer. These patients should proceed to curative resectional surgery; however a number of reasons may affect this e.g. initial under staging of disease<sup>1</sup>.

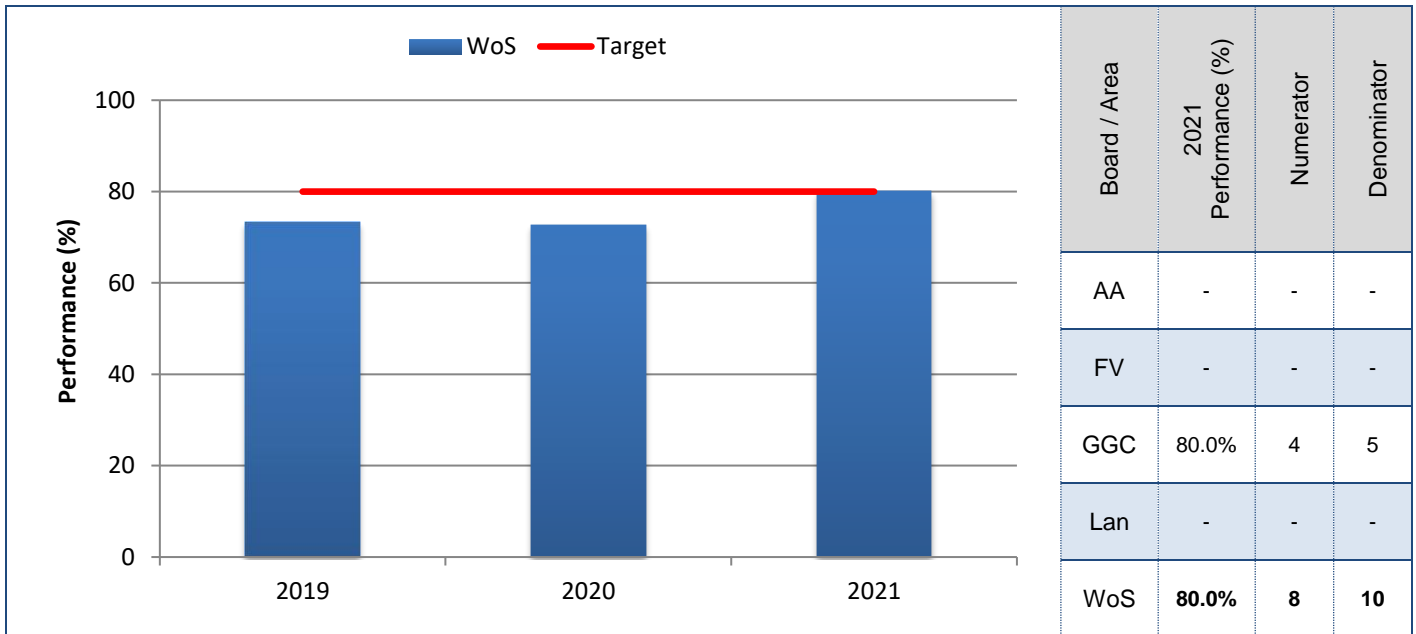
<b>QPI 6:</b>	Patients with oesophageal or gastric cancer whose treatment plan is neoadjuvant chemotherapy or chemoradiotherapy followed by surgery should progress to surgery following completion of this treatment.
<b>Numerator:</b>	Number of patients with oesophageal or gastric cancer who receive neoadjuvant chemotherapy or chemoradiotherapy who then undergo surgical resection.
<b>Denominator:</b>	All patients with oesophageal or gastric cancer who receive neoadjuvant chemotherapy or chemoradiotherapy.
<b>Exclusions:</b>	No exclusions.
<b>Target:</b>	80%

### Oesophageal Cancer



Across WoS, 78.4% of patients diagnosed with oesophageal cancer who received neo-adjuvant chemotherapy or chemoradiotherapy went on to have surgical resection in 2021 with all NHS Boards except NHSGGC achieving the 80% target.

## Gastric Cancer



Due to the small numbers included within the denominator the figure above shows results at a regional level. Across the WoS 80.0% of gastric cancer patients that received neo-adjuvant chemotherapy went on to have surgical resection meeting the 80% QPI target.

Performance against this QPI appears to have increased in recent years, although it should be noted that numbers of patients included within this QPI are low and therefore comparison between performance of NHS Boards and years should be made with caution. NHS Boards not meeting the target have undertaken detailed clinical review of oesophageal and gastric cancer patients not progressing to surgery. As in previous years it was noted that patients could not always progress to surgery due to disease progression or patient fitness. These results reflect the difficulties of getting a predominantly elderly comorbid population through radical treatment and the need to adapt treatment plans to changing circumstances. Improving performance against this QPI would be challenging as, despite undertaking CPET testing, high risk anaesthetic assessments and tailor made pre-habilitation programmes there will still be some patients with disease progression following neoadjuvant treatment or who become unfit for surgery.

## QPI 7: 30/90-day Mortality Following Surgery

Treatment related mortality is a marker of the quality and safety of the whole service provided by the MDT. Treatment should only be undertaken in individuals that may benefit from treatment, that is, disease specific treatments should not be undertaken in futile situations.

<b>QPI 7:</b>	30 and 90-day mortality following surgical resection for oesophageal or gastric cancer.	
<b>Numerator:</b>	Number of patients with oesophageal or gastric cancer who undergo surgical resection who die within 30 or 90 days of treatment.	
<b>Denominator:</b>	All patients with oesophageal or gastric cancer who undergo surgical resection.	
<b>Exclusions:</b>	No exclusions.	
<b>Target:</b>	30 day: < 5%	90 day: <7.5%

### Oesophageal Cancer

Board / Area	30 Day Mortality					90 Day Mortality				
	2021 Performance	Numerator	Denominator	2020 Performance	2019 Performance	2021 Performance	Numerator	Denominator	2020 Performance	2019 Performance
AA	0%	0	6	-	0%	0%	0	6	-	0%
FV	*	0	0	*	-	*	0	0	*	-
GGC	0%	0	50	0%	4.8%	4.9%	2	41	3.0%	5.4%
Lan	8.3%	1	12	0%	-	9.1%	1	11	0%	-
WoS	1.5%	1	68	0%	3.4%	5.2%	3	58	2.4%	3.8%

Within the WoS, there was one death within 30 days of surgical resection for oesophageal cancer (1.5%) and three deaths recorded within 90 days (5.2%) in 2021. While both the 30 and 90 day target were met for this QPI at a regional level they were not met in NHS Lanarkshire as the result of the death of a single patient, which was not linked to surgical complications. Review of performance against this measure from 2013-2021 suggest that there were no discernible differences in post-surgical mortality between NHS Boards nor any trends in mortality over time.

### Gastric Cancer

Board / Area	30 Day Mortality					90 Day Mortality				
	2021 Performance	Numerator	Denominator	2020 Performance	2019 Performance	2021 Performance	Numerator	Denominator	2020 Performance	2019 Performance
AA	-	-	-	*	-	-	-	-	*	-
FV	*	0	0	*	-	*	0	0	*	-
GGC	0%	0	13	0%	0%	0%	0	12	0%	0%
Lan	-	-	-	-	0%	-	-	-	-	0%
WoS	0%	0	15	0%	0%	0%	0	14	0%	0%

Within the WoS, there were no deaths within the 30 or 90 days following surgical resection for gastric cancer and therefore the 30 and 90 day target was met for gastric cancer patients.

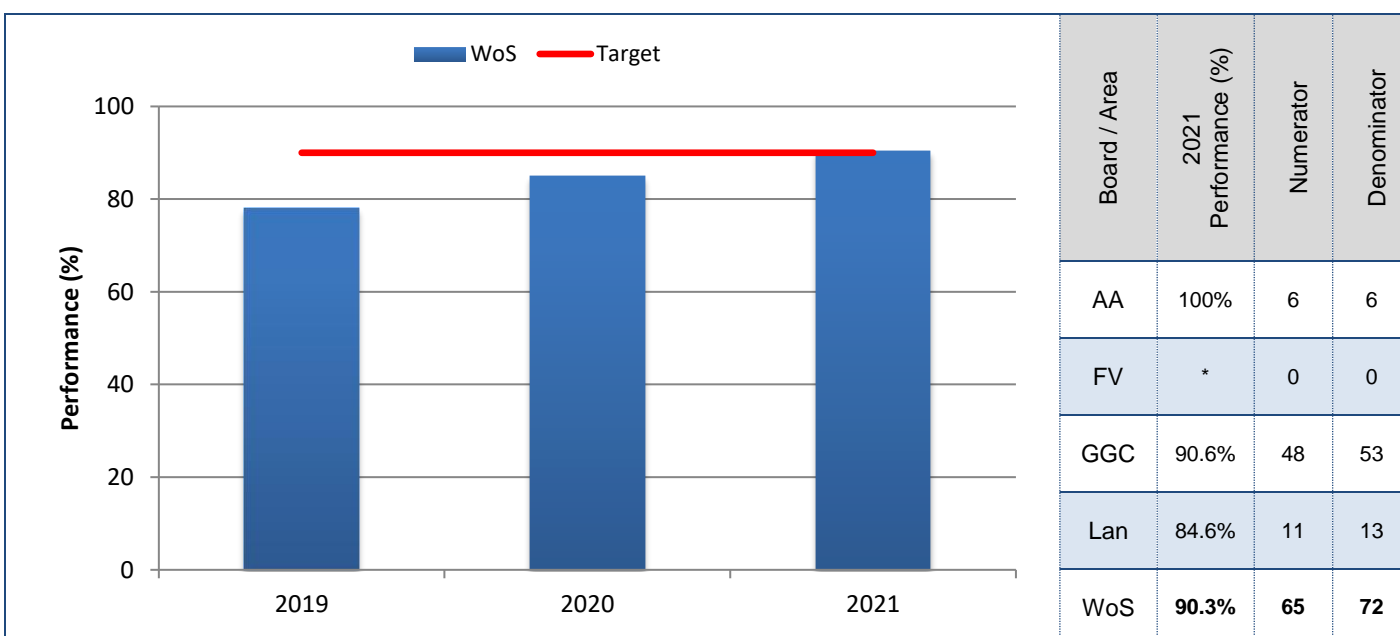
## QPI 8: Lymph Node Yield

Maximising the number of lymph nodes resected and analysed enables reliable staging which influences treatment decision making. Evidence recommends that at least 15 lymph nodes are resected and examined by a pathologist<sup>1</sup>.

The tolerance within the QPI target accounts for situations where patients are not fit enough to undergo extensive lymphadenectomy and for situations where surgical resection is performed for palliation<sup>1</sup>.

<b>QPI 8:</b>	For patients with oesophageal or gastric cancer undergoing curative resection the number of lymph nodes examined should be maximised.
<b>Numerator:</b>	Number of patients with oesophageal or gastric cancer who undergo surgical resection where $\geq 15$ lymph nodes are resected and pathologically examined.
<b>Denominator:</b>	All patients with oesophageal or gastric cancer who undergo surgical resection.
<b>Exclusions:</b>	No exclusions.
<b>Target:</b>	Oesophageal - 90% Gastric - 80%

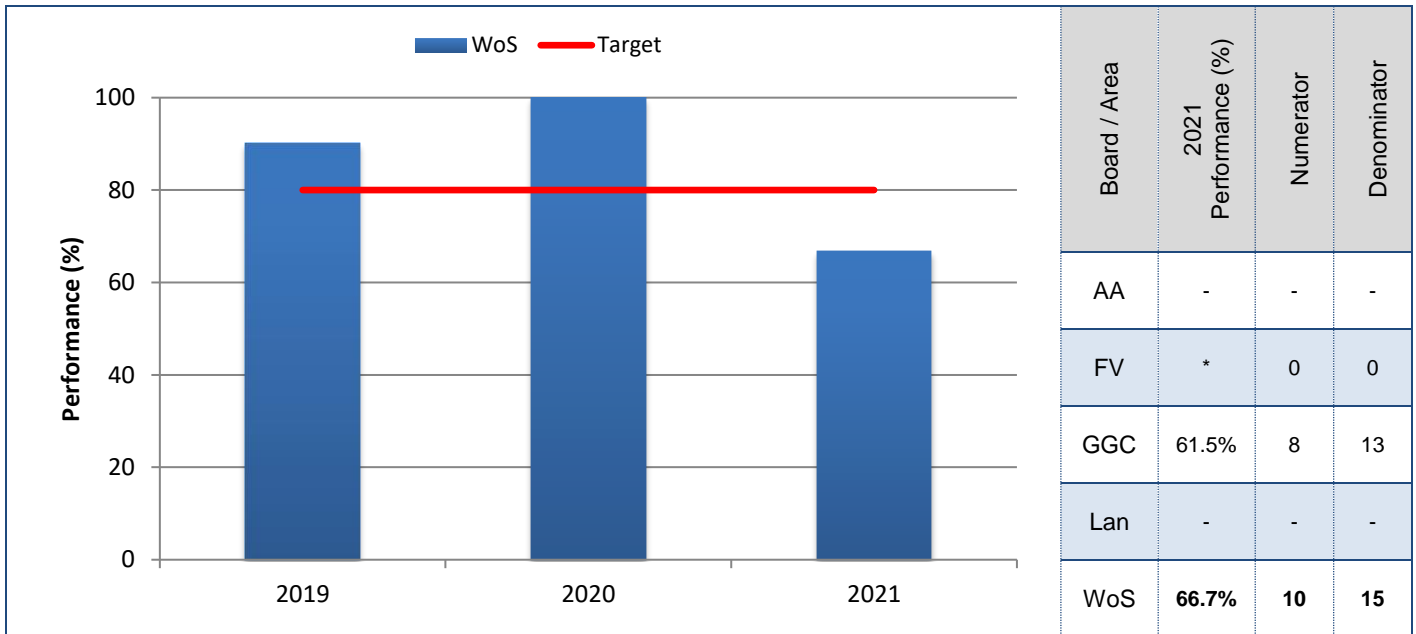
## Oesophageal Cancer



Of the 72 oesophageal patients who underwent surgical resection, 65 had  $\geq 15$  lymph nodes resected and pathologically examined. This equates to a rate of 90.3%, meeting the target rate of 90% at a regional level; however the target was not met by NHS Lanarkshire. Due to the small numbers in individual boards overall WoS figures are displayed.



## Gastric Cancer



Of the 15 patients with gastric cancer undergoing surgical resection, 10 had 15 or more lymph nodes resected and pathologically examined; this resulted in a WoS performance of 66.7%; below the 80% target.

There are known difficulties in achieving high lymph node yield in **all** patients due to a number of factors including:

- The impact of neo-adjuvant treatments on nodes.
- The extent of radicality appropriate in co-morbid patients.
- Pathology resource, as finding nodes can be time consuming.
- Lack of consistency in reporting of lymph node yield, as identified in a recent UK wide review.

Once again, in respect of both oesophageal and gastric cancers, the number of patients included within the denominator is low and can have a considerable effect on overall proportions, therefore comparisons of performance should be made with caution. There does however, appear to be an improvement in performance for oesophageal cancer patients.

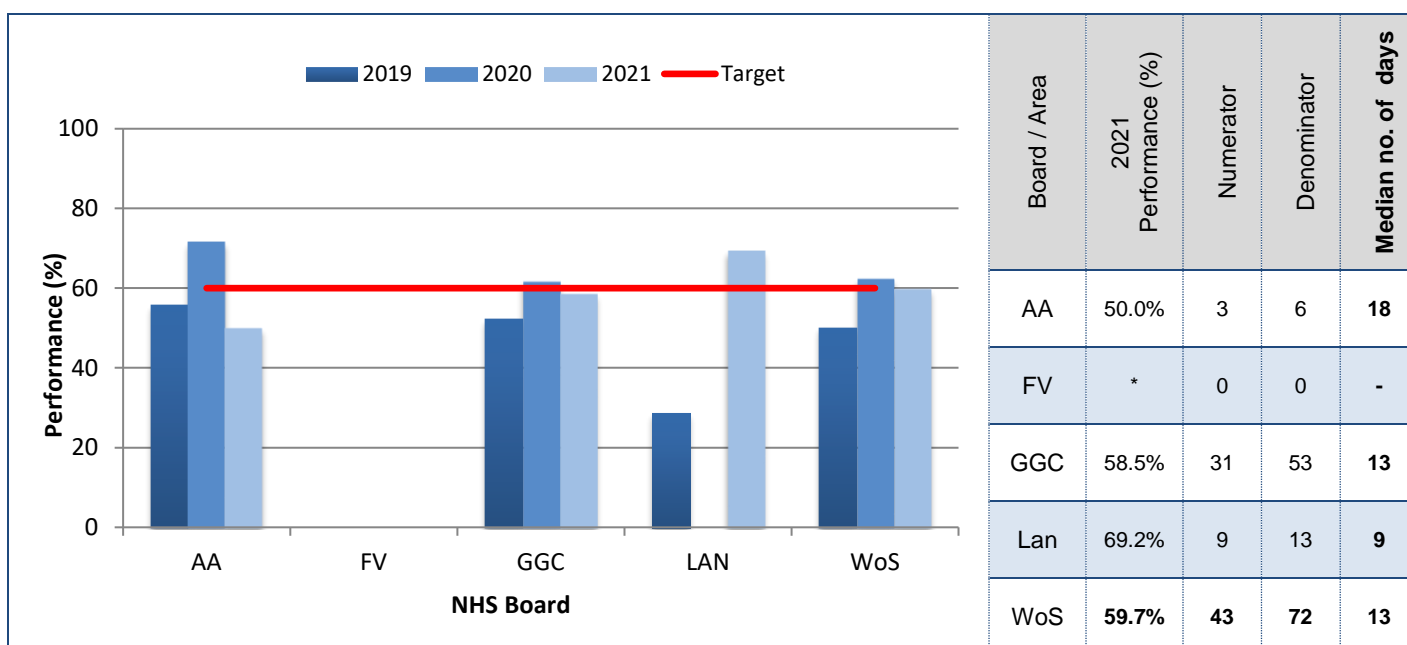
NHSGGC undertook a review of the 5 gastric cancer patients not meeting this QPI; 3 of the 5 patients had undergone appropriate pragmatic resections due to patient fitness, the other 2 patients had neoadjuvant chemotherapy and underwent radical subtotal gastrectomies yielding 11 and 13 lymph nodes respectively. These counts are outliers but do not raise particular concerns. NHSGGC will continue to monitor lymph node counts.

## QPI 9: Length of Hospital Stay Following Surgery

Length of hospital stay acts as a surrogate measure for the quality of surgery and post-operative care for patients undergoing surgical resection for oesophagogastric cancer<sup>1</sup>. This QPI is intended as a surrogate marker to address various issues of quality care including surgery, post-operative complications, and access to community services. While SMR01 data provided by PSH has previously been utilised for measurement of QPI 9, cancer audit data was used for the first time in 2021..

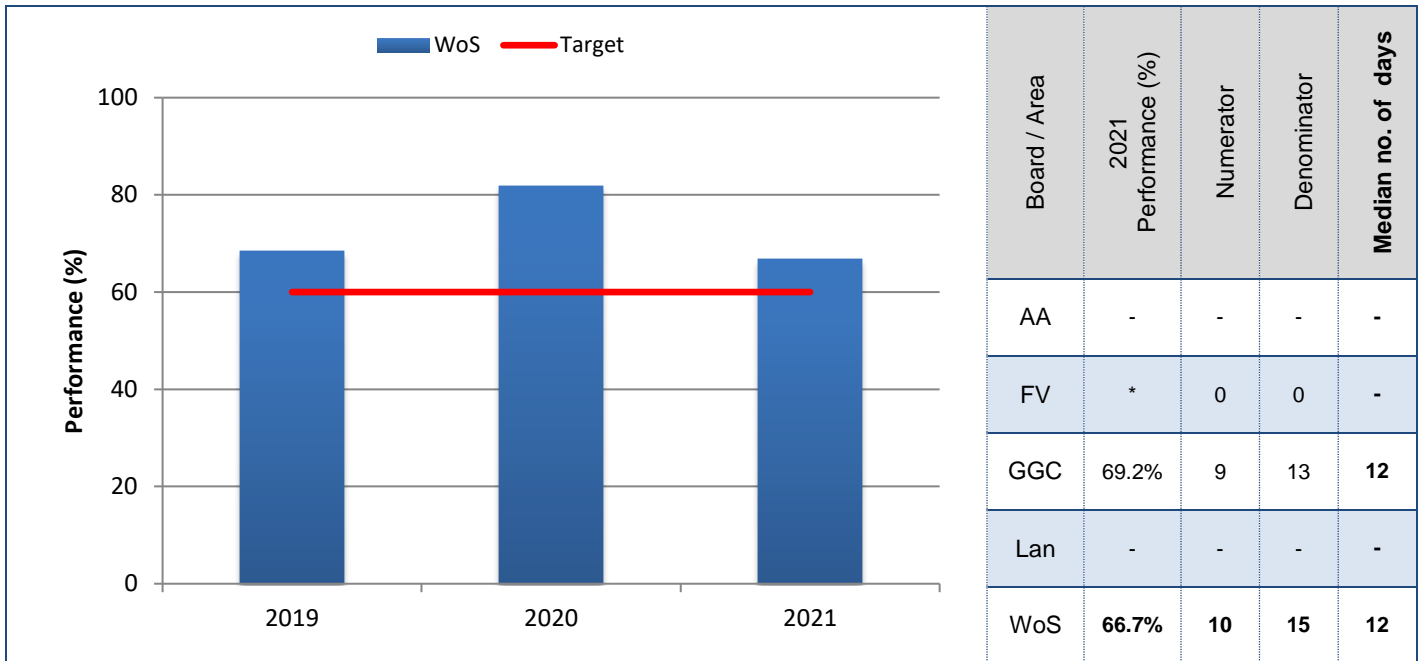
<b>QPI 9:</b>	Length of hospital stay following surgery for oesophageal or gastric cancer should be as short as possible.
<b>Numerator:</b>	Number of patients undergoing surgical resection for oesophageal or gastric cancer who are discharged within 14 days of surgical procedure.
<b>Denominator:</b>	All patients undergoing surgical resection for oesophageal or gastric cancer.
<b>Exclusions:</b>	No exclusions.
<b>Target:</b>	60%

### Oesophageal Cancer



Of the 72 patients undergoing surgical resection for oesophageal cancer, 43 patients were discharged within 14 days of their surgical procedure. This resulted in a WoS performance of 59.7%, narrowly missing the 60% QPI target. The median length of hospital stay is also provided in the table above; on average WoSCAN patients were discharged 13 days after surgery.

## Gastric Cancer



Performance across the WoS was 66.7% against the 60% QPI target, however due to the small numbers of patients included within this QPI individual NHS boards results have not been shown in the figure above and caution must be exercised when comparing performance between years.

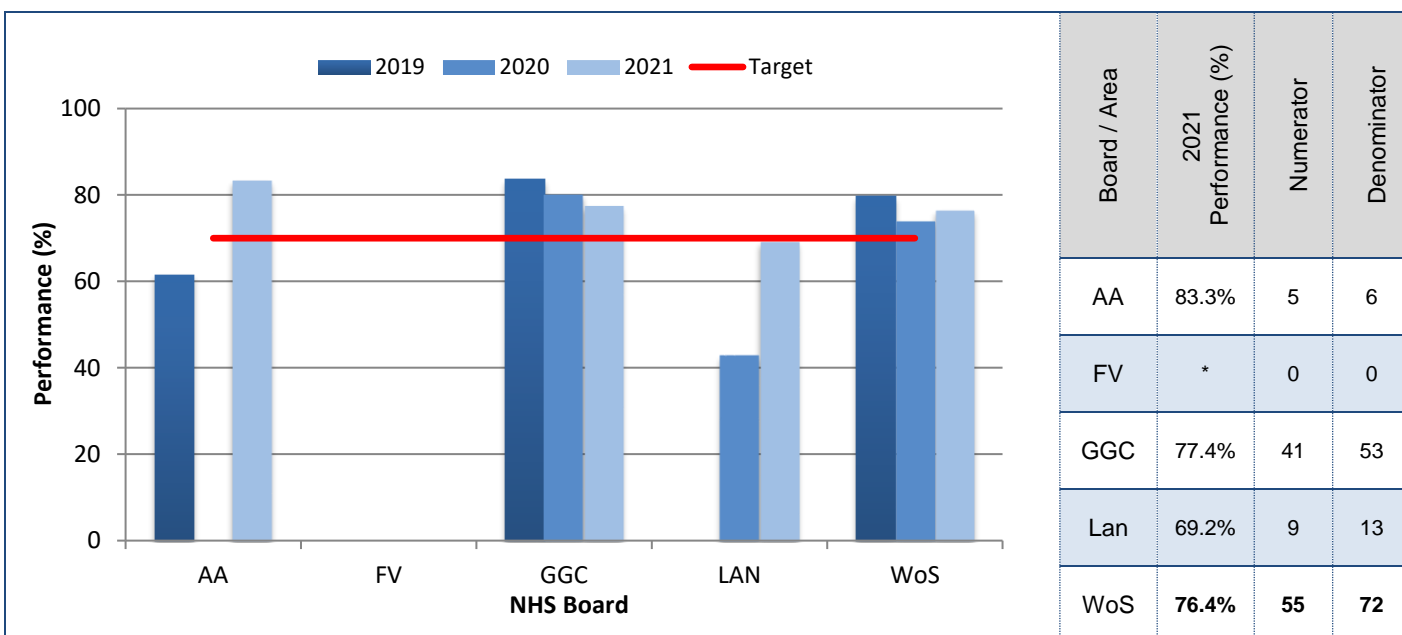
The QPI has been met for patients with gastric cancer with a median length of hospital stay for WoSCAN patients of 12 days following surgery. Review of patients not being discharged within 14 days of surgery reveals that these patients had a range of minor and more complex complications that required a longer hospital stay while social factors also influenced the length of stay of some patients; fluctuations in performance between NHS Board and years is to be expected as results are based on small numbers of patients. All WoSCAN Boards have developed a pathway to enhance recovery after surgery (ERAS) in recent years which will enable patients to recover more quickly after surgery allowing earlier discharge from hospital and return to normal activity. Clinicians across the region have shared their ERAS pathways to facilitate cross site learning and development.

## QPI 10: Resection Margins

Tumour involvement of surgical resection margins following excision is a negative prognostic factor; therefore surgeons should aim to ensure resection margins are clear of tumour<sup>1</sup>.

<b>QPI 10 (i):</b>	Oesophageal cancers which are surgically resected should be adequately excised.
<b>Numerator:</b>	Number of patients with oesophageal cancer who undergo surgical resection in which circumferential surgical margin is clear of tumour.
<b>Denominator:</b>	All patients with oesophageal cancer who undergo surgical resection.
<b>Exclusions:</b>	No exclusions.
<b>Target:</b>	70%

## Oesophageal Cancer

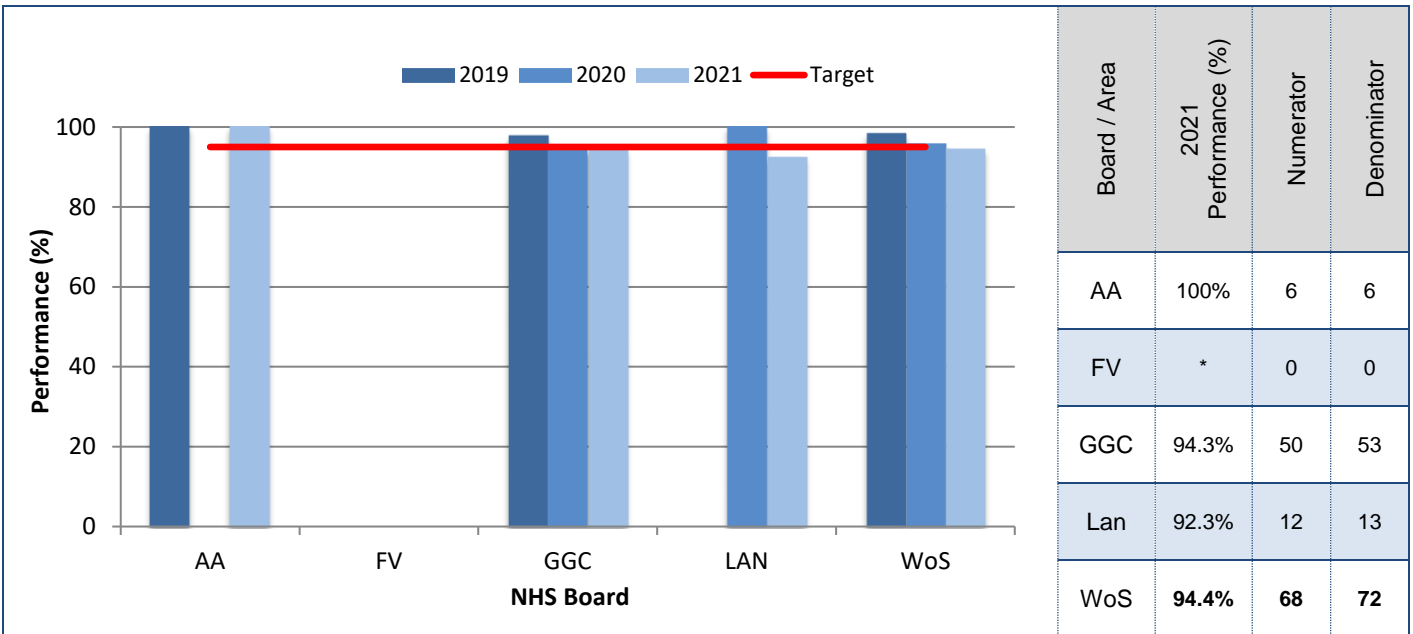


For patients diagnosed with oesophageal cancer the overall performance across the WoS was 76.4%, with 55 of the 72 patients undergoing surgical resection having circumferential margins clear of tumour; meeting the 70% target. This QPI is based on small numbers of patients so it is hard to interpret variations in performance across years and between NHS Boards.

The QPI target was narrowly missed in NHS Lanarkshire. The ability of a surgeon to achieve a clear margin is dependent on the location of the tumour and it is not always possible to remove more tissue. As such results are considered to be a marker of disease and the small numbers of patients included within the QPI rather than the quality of surgery.

<b>QPI 10 (ii):</b>	Oesophageal and gastric cancers which are surgically resected should be adequately excised.
<b>Numerator:</b>	Number of patients with oesophageal or gastric cancer who undergo surgical resection in which longitudinal surgical margin is clear of tumour.
<b>Denominator:</b>	All patients with oesophageal or gastric cancer who undergo surgical resection.
<b>Exclusions:</b>	No exclusions.
<b>Target:</b>	95%

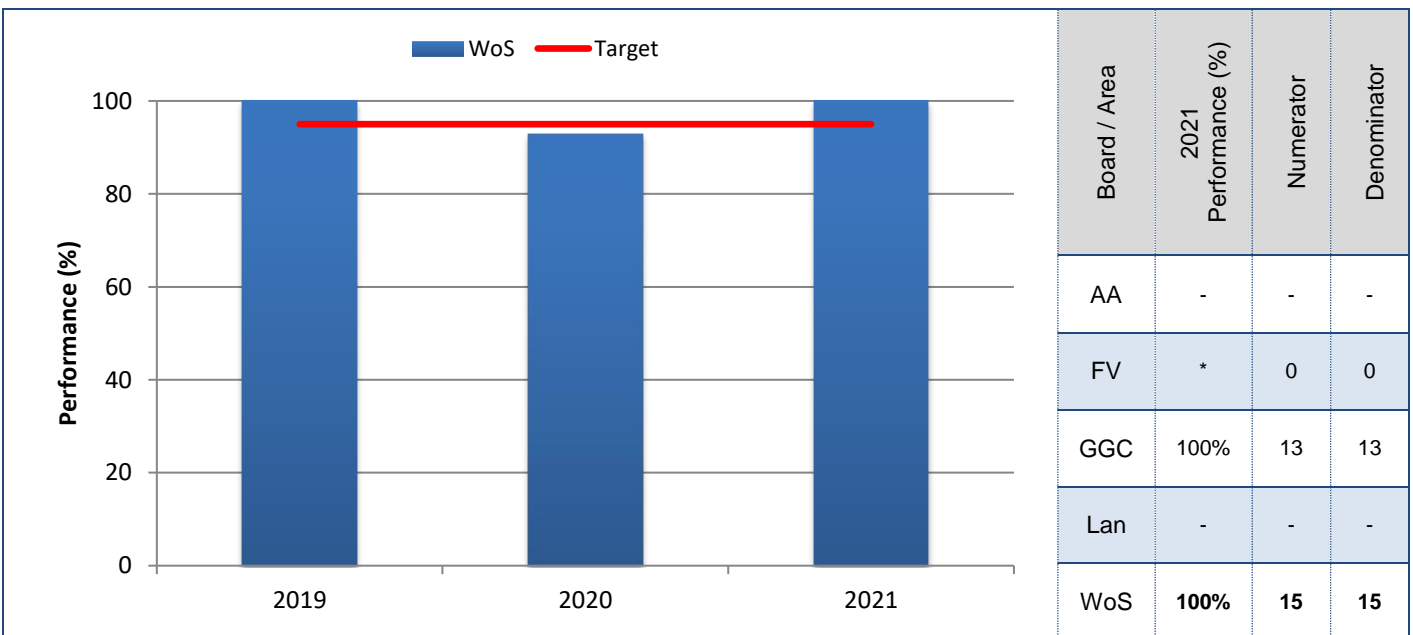
## Oesophageal Cancer



Overall in the WoS of the 72 patients with oesophageal cancer undergoing surgical resection 68 had clear longitudinal margins, resulting in a performance of 94.4%, just missing the (recently increased) target of 95%.

NHSGGC and NHS Lanarkshire narrowly missed the 95% target due to the outcomes of four patients; all four patients had microscopic involvement of the surgical margins that was not visible at the time of surgery, therefore results are not considered to reflect any concerns with surgical performance.

## Gastric Cancer



Due to the small number of patients in each NHS board overall WoS results are displayed in the figure above. Across the WoS all 15 patients diagnosed with gastric cancer had clear longitudinal margins following surgical resection, meeting the recently increased QPI target of 95%.

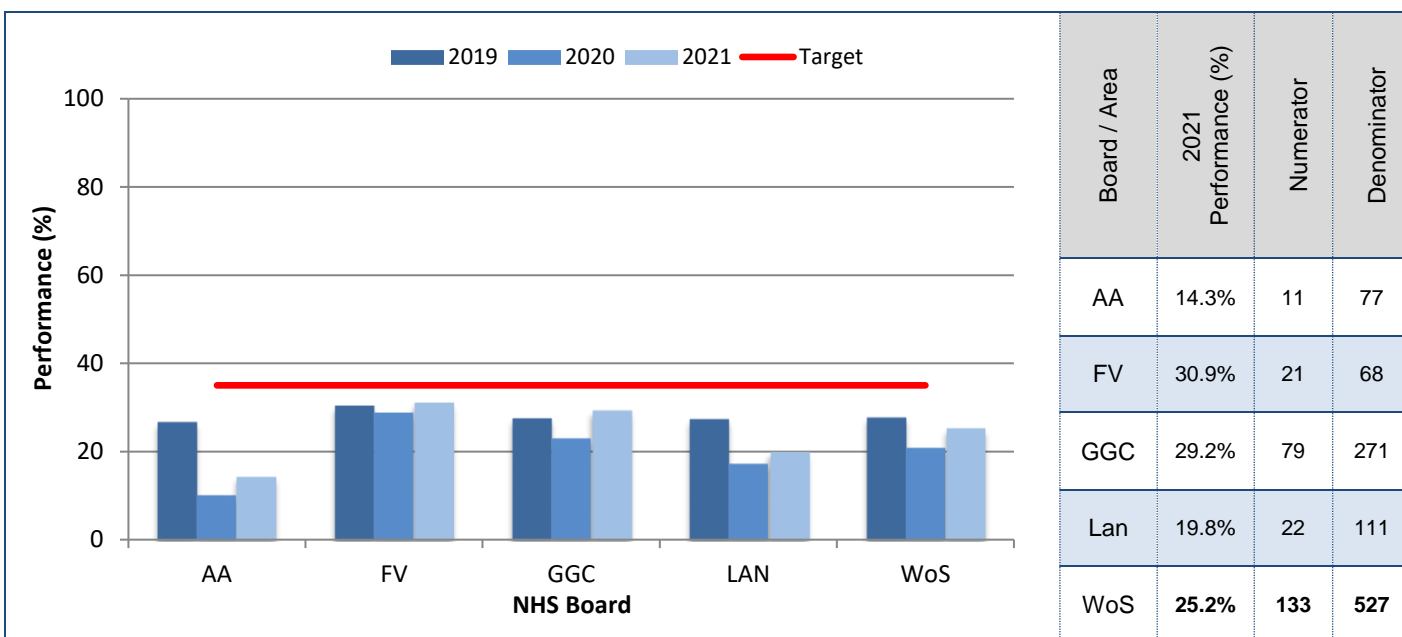
## QPI 11: Curative Treatment Rates

Surgical resection of the tumour remains the mainstay of curative treatment for patients with oesophageal or gastric cancer<sup>1</sup>. However in those patients with oesophageal cancer who have locally advanced disease, are unfit for surgery, or decline surgery, chemoradiotherapy should be considered. Radiotherapy alone is also an option in patients considered unsuitable for combination therapy but is rarely curative for oesophageal cancer.

The tolerance within the target takes account of patient choice, fitness and comorbidities which preclude curative treatment. It is recognised that the majority of patients will have advanced disease at presentation.

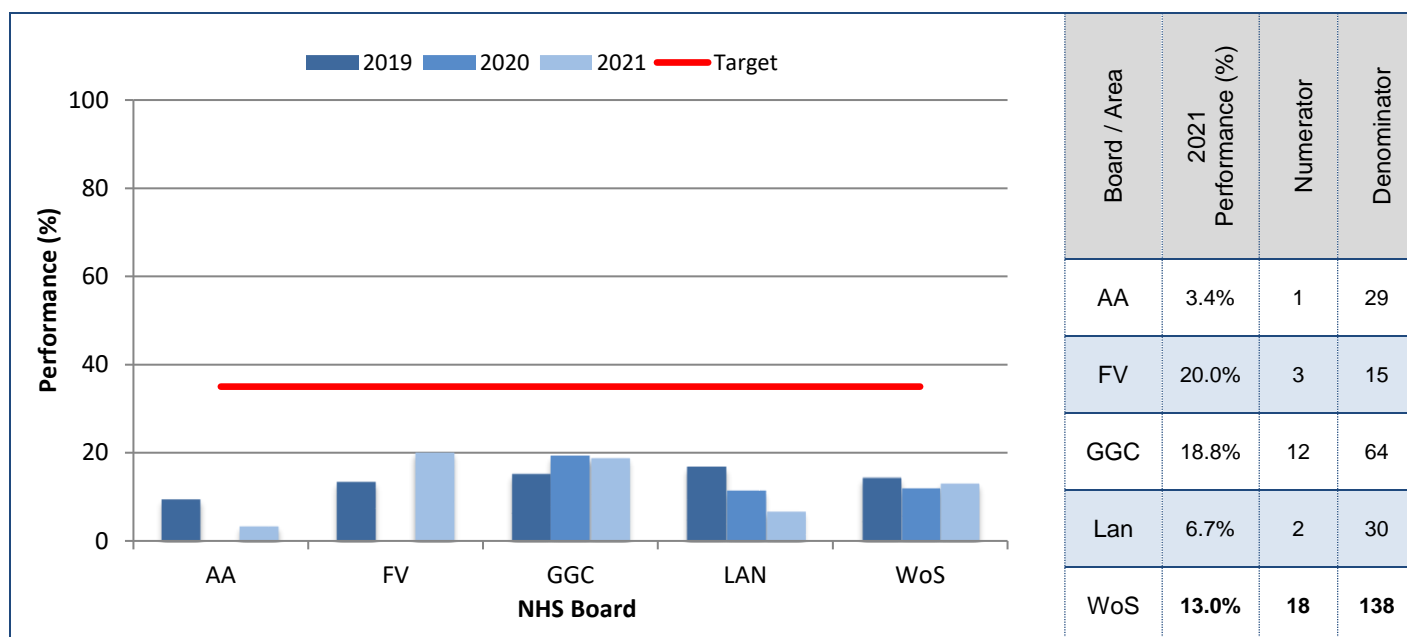
<b>QPI 11:</b>	Patients with oesophageal or gastric cancer should undergo curative treatment whenever possible.
<b>Numerator:</b>	Number of patients with oesophageal or gastric cancer who undergo curative treatment. <ul style="list-style-type: none"> <li>• Neoadjuvant chemoradiotherapy or chemotherapy followed by surgery;</li> <li>• Primary surgery;</li> <li>• Radical chemoradiotherapy; and</li> <li>• Endoscopic Mucosal Resection</li> </ul>
<b>Denominator:</b>	All patients with oesophageal or gastric cancer.
<b>Exclusions:</b>	No exclusions.
<b>Target:</b>	35%

## Oesophageal Cancer



Of the 527 patients diagnosed with oesophageal cancer in 2021, 133 underwent curative treatment, resulting in a WoS performance of 25.2%, well below the 35% target but an improvement on the 2020 figure of 20.6%.

## Gastric Cancer



Overall performance across the WoS was 13.0%, with 18 of 138 gastric patients undergoing curative treatment; below the 35% QPI target.

Review of oesophageal and gastric patients not having curative treatment indicate that a high percentage of patients are not suitable for curative treatment due to the presence of metastatic disease, locally advanced disease or poor performance status. Due to late presentation of disease and high levels of comorbidity this QPI is very challenging and will be very hard to achieve unless efforts are made to improve levels of health and to establish awareness campaigns aimed at encouraging patients to present early; when cure is achievable. Never-the-less WoSCAN are keen to ensure that treatment decisions continue to be reviewed and challenged to ensure that patients receive the best care. The target for this QPI was derived from figures from the National Oesophago-Gastric Cancer Audit (NOGCA), an audit covering England and Wales. To better understand the differences in reported curative treatment rates between Scotland and the rest of the UK, UK wide analysis is currently underway; preliminary data suggest that case ascertainment in Scotland is higher than for NOGCA, indicating that higher reported curative treatment rates in England may be influenced by the under recording of patients with more advanced disease. Full results from this analysis are eagerly awaited and are anticipated to provide a better understanding of whether there are real differences in curative treatment rates across the UK and whether there are areas for improvement in WoSCAN.

In addition, in 2020 delays in presentation due to the COVID-19 pandemic resulted in patients presenting with more advanced disease, further reducing options for progressing with curative treatment. Results in 2021 are closer to pre-pandemic levels.

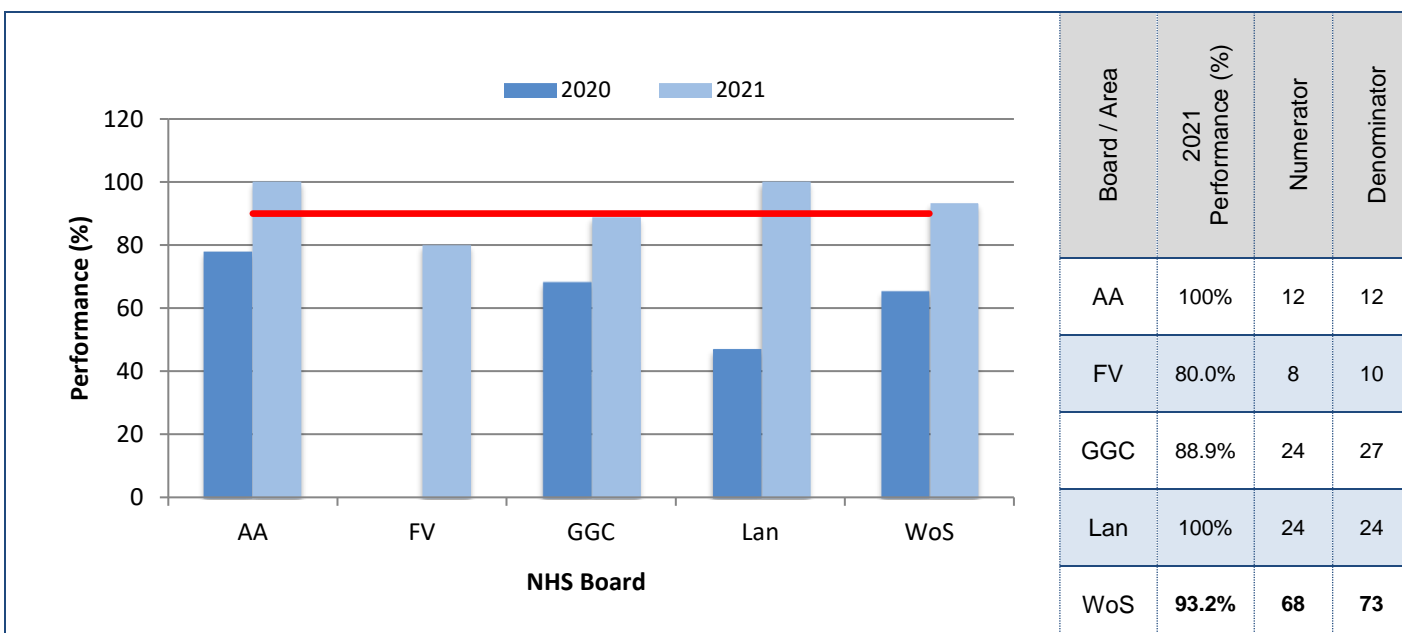
Additional analysis was undertaken to look at curative treatment rate for patients with different stages of disease and different performance status. On review of these data it was noteworthy that for oesophageal cancer patients 2 patients with Stage I disease (29%) and 38 patients with Stage II disease (58%) did not have curative intent. Similarly for gastric cancer, analysis indicated that 5 patients with Stage I disease (66%) and 11 patients with Stage II disease (69%) did not have curative intent. Audit of patients diagnosed in 2015-19 with stage I-II disease that did not receive radical treatment indicates that, for the majority, patient fitness precluded radical treatment plans; this can only be tackled with public health education.

Further, it is hoped that the recent roll out of cytosponge across WoSCAN will facilitate the early diagnosis of upper GI cancer and result in the improvement of curative treatment rates.

### QPI 13: HER2 Status for Decision Making

HER2 is a negative prognostic factor affecting recurrence rates. Availability of HER2 status is important to inform treatment decision making. Delay in the availability of HER2 status result may lead to a delay in appropriate therapy and complicate the communication of a clear plan to the patient<sup>1</sup>.

<b>QPI 13:</b>	HER2 status should be available to inform treatment decision making in patients with oesophageal or gastric adenocarcinoma.
<b>Description:</b>	Proportion of patients with oesophageal or gastric adenocarcinoma undergoing first line palliative chemotherapy as their initial treatment for whom the HER2 status is reported prior to commencing treatment.
<b>Numerator:</b>	Number of patients with oesophageal or gastric adenocarcinoma undergoing first line palliative chemotherapy as their initial treatment for whom the HER2 status is reported prior to commencing treatment.
<b>Denominator:</b>	All patients with oesophageal or gastric adenocarcinoma undergoing first line palliative chemotherapy as their initial treatment.
<b>Exclusions:</b>	No exclusions
<b>Target:</b>	90%



Across the WoS, of the 73 patients with oesophageal or gastric adenocarcinoma undergoing first line palliative chemotherapy as their initial treatment, 68 patients had HER2 status reported prior to commencing treatment. Consequently performance was 93.2%; meeting the 90% target at a regional level and a considerable improvement compared with the 2020 performance of 65.4%, the first year of reporting of this revised measure.

The considerable improvement in performance against this QPI is considered to be due to increased awareness of the need for HER2 testing. Historically all HER2 testing has been undertaken in London. In 2022, local HER2 testing was undertaken for NHC GGC patients for the first time and it is anticipated that over the coming year local testing (in NHC GGC) will be rolled out for the whole of the WoS; this is expected to result in further improvements in performance against this measure in future years.



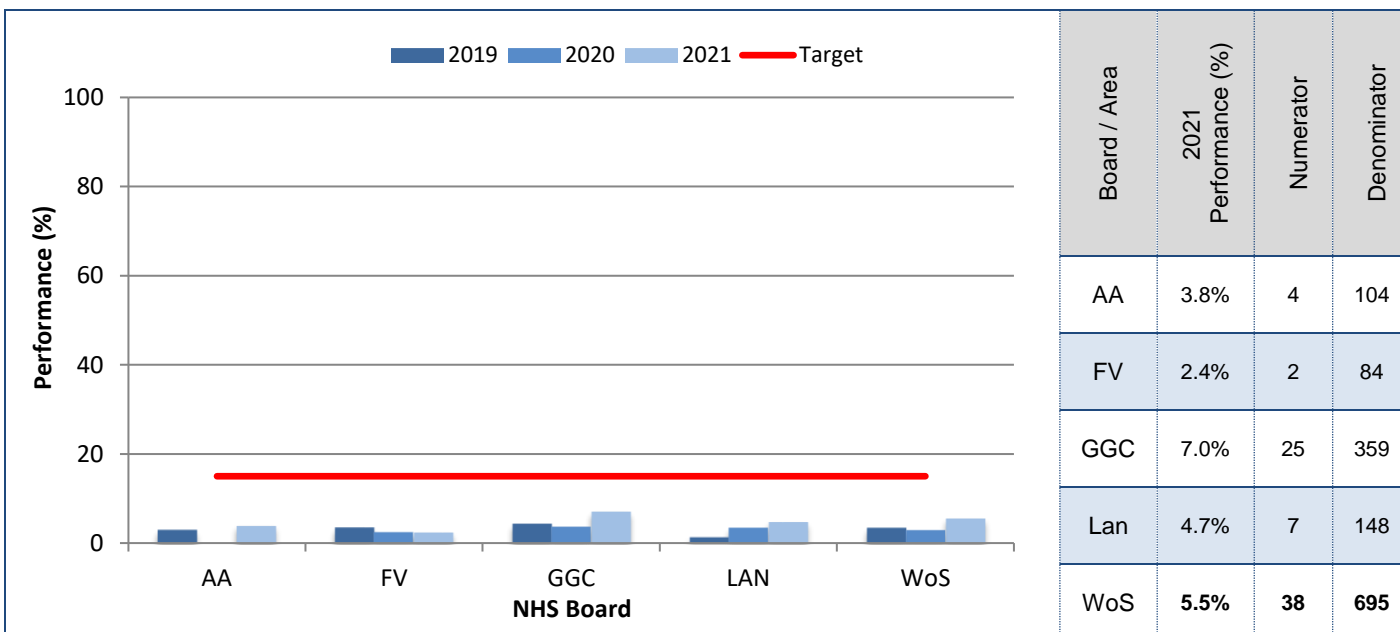
## QPI 14: Clinical Trials and Research Study Access

Clinical trials are necessary to demonstrate the efficacy of new therapies and other interventions. Evidence suggests improved patient outcomes when hospitals are actively recruiting patients into clinical trials. Clinicians are therefore encouraged to enter patients into well designed trials and to collect long term follow up data<sup>7</sup>.

The clinical trials QPI is measured utilising Scottish Cancer Research Network (SCRN) data and ISD incidence data, as is the methodology currently utilised by the Chief Scientist Office (CSO) and the National Cancer Research Institute (NCRI). The principal benefit of this approach is that this data is already collected utilising a robust mechanism<sup>4</sup>.

<b>QPI 14:</b>	All patients should be considered for participation in available clinical trials/research studies, wherever eligible.
<b>Description:</b>	Proportion of patients diagnosed with Upper GI cancer who are consented for a clinical trial/research study.
<b>Numerator:</b>	Number of patients diagnosed with Upper GI cancer consented for a clinical trial/research study.
<b>Denominator:</b>	All patients diagnosed with Upper GI cancer.
<b>Exclusions:</b>	<ul style="list-style-type: none"> <li>No exclusions</li> </ul>
<b>Target:</b>	15%

### All Upper GI Cancer



Results provided are for numbers of patients consented for clinical trials or research studies in 2021 and are reported by the patients Board of residence. The denominator for this QPI is identified by using a 5 year average of Scottish Cancer Registry data. Overall in the WoS approximately 5.5% of patients with upper GI cancer were consented for clinical trials and research study access, well below the target of 15% but an improvement on performance for 2019 and 2020. A list of the trials for which patients from WoSCAN were consented is provided below.

Project Title	No. patients consented
BGB-290-103 A Phase 1b Study of BGB-290	3
Clinical trial protocol Module C	4
DZB-CS-202: phase 1b/2 HER2-negative gastric adenocarcinoma study	4
IMAGINE	2
M6620 plus standard treatment in oesophageal and other cancer	1
MATTERHORN	2
MORPHEUS - GASTRIC CANCER	10
PROCLAIM-CX-2029	5
SN38-SPL9111 in advanced solid tumours	2
Study of IMC-C103C as monotherapy and in combination with Atezolizumab	5

This is a generic QPI which applies to all tumour groups. The target of 15% is particularly challenging for patients with Upper GI cancer due to the relatively low curative treatment rates for this disease. Nevertheless there is room for improvements in consenting patients for clinical trials and clinicians in the WoS are keen to increase both the range of trials open for recruitment within the WoS Boards and the numbers of patients recruited into these trials.

## **5. Next Steps**

The MCN will actively take forward regional actions identified and NHS Boards are asked to develop local Action/Improvement Plans in response to the findings presented in the report. A summary of actions for each NHS Board has been included within the Action Plan templates in Appendix 3.

## 6. Acknowledgements

This report has been prepared using clinical audit data provided by each of the NHS Boards in the WoSCAN area. We would like to thank colleagues in the clinical effectiveness departments throughout the WoS for gathering, submitting and verifying these data. We would also like to thank the clinicians, nurses and others involved in the management of upper GI cancer in the WoS for their contribution.

## 7. Abbreviations

<b>AA / NHSAA</b>	NHS Ayrshire & Arran
<b>ACaDMe</b>	Acute Cancer Deaths and Mental Health (information system)
<b>CNS</b>	Clinical Nurse Specialist
<b>e-CASE</b>	Electronic Cancer Audit Support Environment
<b>EUS</b>	Endoscopic Ultrasound
<b>FV / NHSFV</b>	NHS Forth Valley
<b>GGC / NHSGGC</b>	NHS Greater Glasgow and Clyde
<b>GI</b>	Gastro-intestinal
<b>ISD</b>	Information Services Division (NHS National Services Scotland)
<b>Lan / NHS Lan</b>	NHS Lanarkshire
<b>MCN</b>	Managed Clinical Network
<b>MDT</b>	Multidisciplinary Team
<b>SACT</b>	Systemic anti-cancer therapy
<b>QPIs</b>	Quality Performance Indicators
<b>RCAG</b>	Regional Cancer Advisory Group
<b>TNM</b>	Tumour, Nodes, Metastases (staging system)
<b>WoS</b>	West of Scotland
<b>WoSCAN</b>	West of Scotland Cancer Network

## 8. References

1. Upper GI Cancer. Clinical Quality Performance Indicators. Updated September 2020. [http://www.healthcareimprovementscotland.org/our\\_work/cancer\\_care\\_improvement/programme\\_resources/cancer\\_qpis.aspx](http://www.healthcareimprovementscotland.org/our_work/cancer_care_improvement/programme_resources/cancer_qpis.aspx)
2. PHS. Cancer incidence in Scotland to December 2020. April 2022. [Cancer incidence in Scotland - to December 2020 - Cancer incidence in Scotland - Publications - Public Health Scotland](#)
3. PHS. [COVID-19 wider impacts \(shinyapps.io\)](#)
4. PHS. Cancer survival statistics – People diagnosed with cancer between 2013 and 2017. January 2021. Available at: [http://www.isdscotland.org/Health-Topics/Cancer/Cancer-Statistics/Survival\\_summary\\_8307.pdf?1](http://www.isdscotland.org/Health-Topics/Cancer/Cancer-Statistics/Survival_summary_8307.pdf?1)
5. Clinical Trials Quality Performance Indicator. July 2014 (updated October 2017). Available at: [http://www.healthcareimprovementscotland.org/our\\_work/cancer\\_care\\_improvement/programme\\_resources/cancer\\_qpis.aspx](http://www.healthcareimprovementscotland.org/our_work/cancer_care_improvement/programme_resources/cancer_qpis.aspx)

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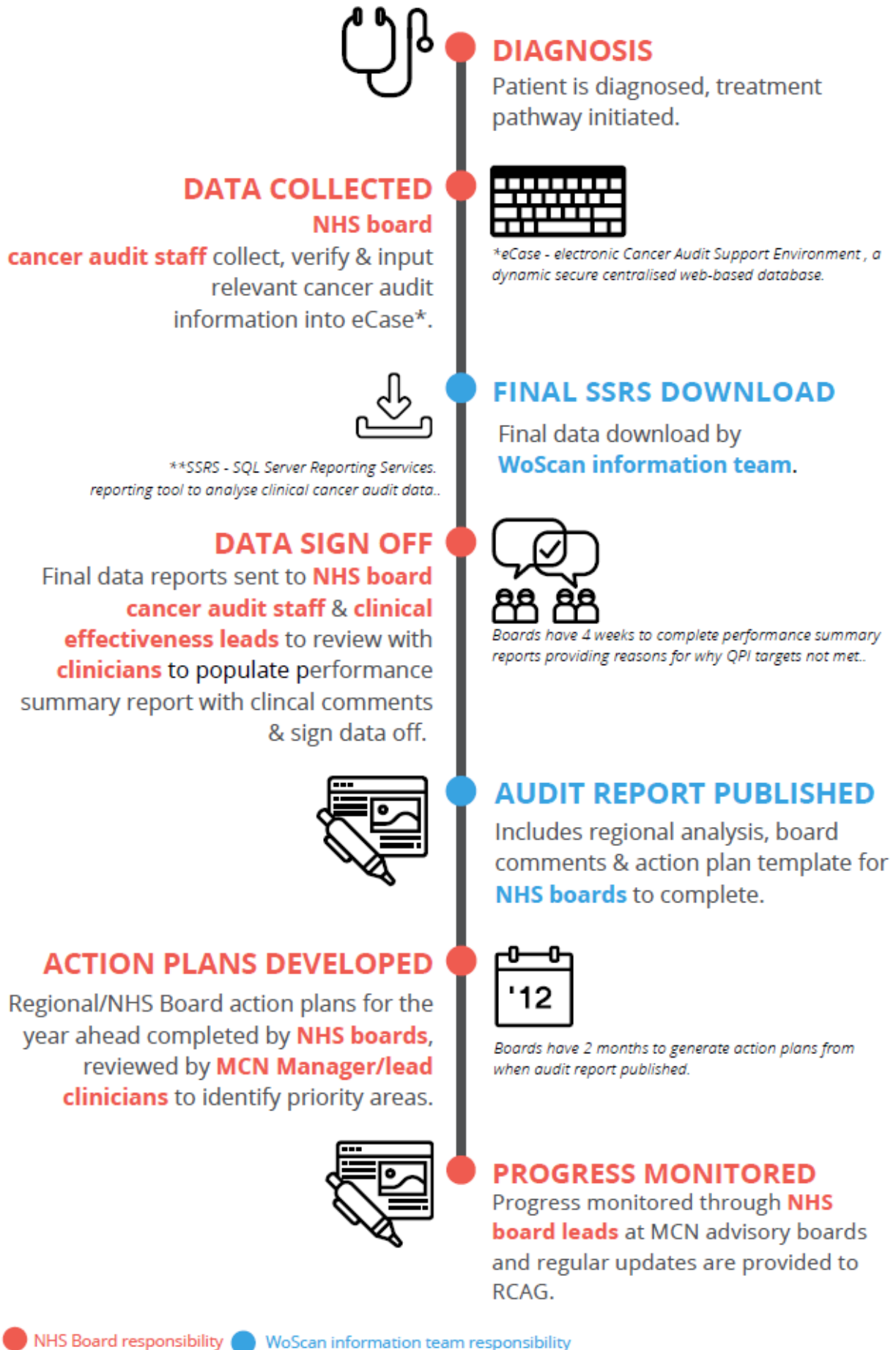
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## Appendix 1: Meta Data

Report Title	Audit Report: Upper GI Cancer Quality Performance Indicators																								
Time Period	Patients diagnosed between 01 January 2021 to 31 December 2021																								
Data Source	Electronic Cancer Audit Support Environment (eCASE). A secure centralised web-based database which holds cancer audit information in Scotland.																								
Data extraction date	2200 hrs on 8 July 2022																								
Methodology	<p>Analysis was performed centrally for the region by the WoSCAN Information Team. The timescales agreed took into account the patient pathway to ensure that a complete treatment record was available for the majority of patients.</p> <p>Initial results were provided to Boards to check for inaccuracies, inconsistencies or obvious gaps and a subsequent download taken upon which final analysis was carried out.</p> <p>The final data analysis was disseminated for NHS Board verification in line with the regional audit governance process to ensure that the data was an accurate representation of service in each area. Please see info graphic in appendix 2 for a more detailed look at the reporting process.</p>																								
Data Quality	<p>Audit data completeness can be assessed by estimating the proportion of expected patients that have been identified through audit compared to the number reported by the National Cancer registry (provided by ISD, National Services Division), this is known as case ascertainment. Figures should only be used as a guide as it is not possible to compare the same exact cohort from each data source. Note that a 5 year average is taken for cancer registry cases to take account of annual fluctuations in incidence within NHS Boards.</p> <table border="1" data-bbox="418 1317 1348 1626"> <thead> <tr> <th>Health Board of diagnosis</th> <th>2021 Audit Data</th> <th>Cases from Cancer registry (2016-2020)</th> <th>Case Ascertainment</th> </tr> </thead> <tbody> <tr> <td>Ayrshire &amp; Arran</td> <td>106</td> <td>104</td> <td>101.9%</td> </tr> <tr> <td>FV</td> <td>83</td> <td>84</td> <td>98.8%</td> </tr> <tr> <td>GGC</td> <td>338</td> <td>359</td> <td>94.2%</td> </tr> <tr> <td>Lanarkshire</td> <td>141</td> <td>148</td> <td>95.3%</td> </tr> <tr> <td><b>WoS Total</b></td> <td><b>668</b></td> <td><b>695</b></td> <td><b>96.1%</b></td> </tr> </tbody> </table>	Health Board of diagnosis	2021 Audit Data	Cases from Cancer registry (2016-2020)	Case Ascertainment	Ayrshire & Arran	106	104	101.9%	FV	83	84	98.8%	GGC	338	359	94.2%	Lanarkshire	141	148	95.3%	<b>WoS Total</b>	<b>668</b>	<b>695</b>	<b>96.1%</b>
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## Appendix 2: WoSCAN QPI Reporting Process





### Appendix 3: NHS Board Action Plans

A summary of actions for each NHS Board has been included within the Action Plan templates in Appendix 1. Completed Action Plans should be returned to WoSCAN within two months of publication of this report.

#### Upper Gastro-intestinal Cancer Action / Improvement Plan

<b>NHS Board:</b>	NHS Ayrshire & Arran
<b>Action Plan Lead:</b>	
<b>Date:</b>	

KEY (Status)	
<b>1</b>	Action fully implemented
<b>2</b>	Action agreed but not yet implemented
<b>3</b>	No action taken (please state reason)

No	Action Required	NHS Board Action Taken	Timescales		Lead	Progress/Action Status	Status (see key)	
			Start	End				
	<i>Ensure actions mirror those detailed in Audit Report.</i>	<i>Detail specific actions that will be taken by the NHS Board.</i>	<i>Insert date</i>	<i>Insert date</i>	<i>Insert name of responsible lead for each action.</i>	<i>Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.</i>	<i>Insert from above</i>	<i>No. key</i>
1	All NHS Boards across the WoS to relaunch the Endoscopy Quality Improvement Plan to ensure ongoing improvements in the timely histological diagnosis of patients (category: other diagnostic).							
5	All NHS Boards across the WoS to explore documentation solutions and identify a single point for recording MUST score early in the patient pathway, for example as a mandatory field in electronic patient records, mandatory field for MDT referral or a stamp for clinic notes (category: clinical documentation).							

## Upper Gastro-intestinal Cancer Action / Improvement Plan

<b>NHS Board:</b>	NHS Forth Valley
<b>Action Plan Lead:</b>	
<b>Date:</b>	

<b>KEY (Status)</b>	
<b>1</b>	Action fully implemented
<b>2</b>	Action agreed but not yet implemented
<b>3</b>	No action taken (please state reason)

<b>No</b>	<b>Action Required</b>	<b>NHS Board Action Taken</b>	<b>Timescales</b>		<b>Lead</b>	<b>Progress/Action Status</b>	<b>Status (see key)</b>	
			<b>Start</b>	<b>End</b>				
	<i>Ensure actions mirror those detailed in Audit Report.</i>	<i>Detail specific actions that will be taken by the NHS Board.</i>	<i>Insert date</i>	<i>Insert date</i>	<i>Insert name of responsible lead for each action.</i>	<i>Provide detail of action in progress, change in practices, problems encountered or reasons why no action taken.</i>	<i>Insert from above</i>	<i>No. key</i>
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## Upper Gastro-intestinal Cancer Action / Improvement Plan

<b>NHS Board:</b>	NHS Greater Glasgow and Clyde
<b>Action Plan Lead:</b>	
<b>Date:</b>	

KEY (Status)	
<b>1</b>	Action fully implemented
<b>2</b>	Action agreed but not yet implemented
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## Upper Gastro-intestinal Cancer Action / Improvement Plan

<b>NHS Board:</b>	NHS Lanarkshire
<b>Action Plan Lead:</b>	
<b>Date:</b>	

KEY (Status)	
<b>1</b>	Action fully implemented
<b>2</b>	Action agreed but not yet implemented
<b>3</b>	No action taken (please state reason)

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