

West of Scotland Cancer Network

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



Audit Report

**Upper GI Cancer
Quality Performance Indicators**

Report of the 2020 Clinical Audit Data

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Upper GI Quality Performance Indicators Overview

Patients diagnosed January - December 2020

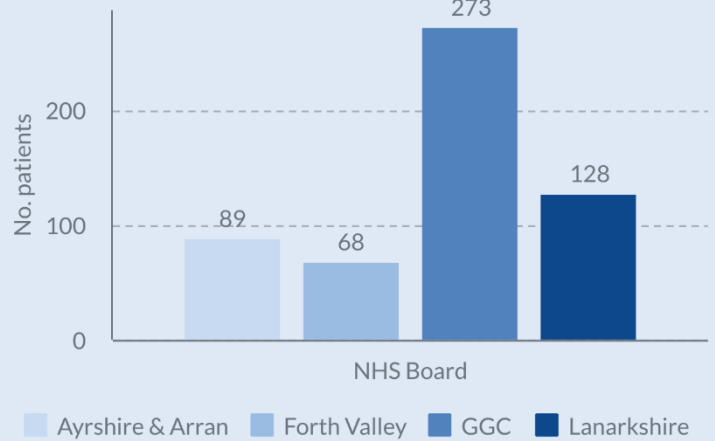
Number of patients: **558**

Gender of patients:	Male	Female
Oesophageal Cancer	71%	29%
Gastric Cancer	56%	44%

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

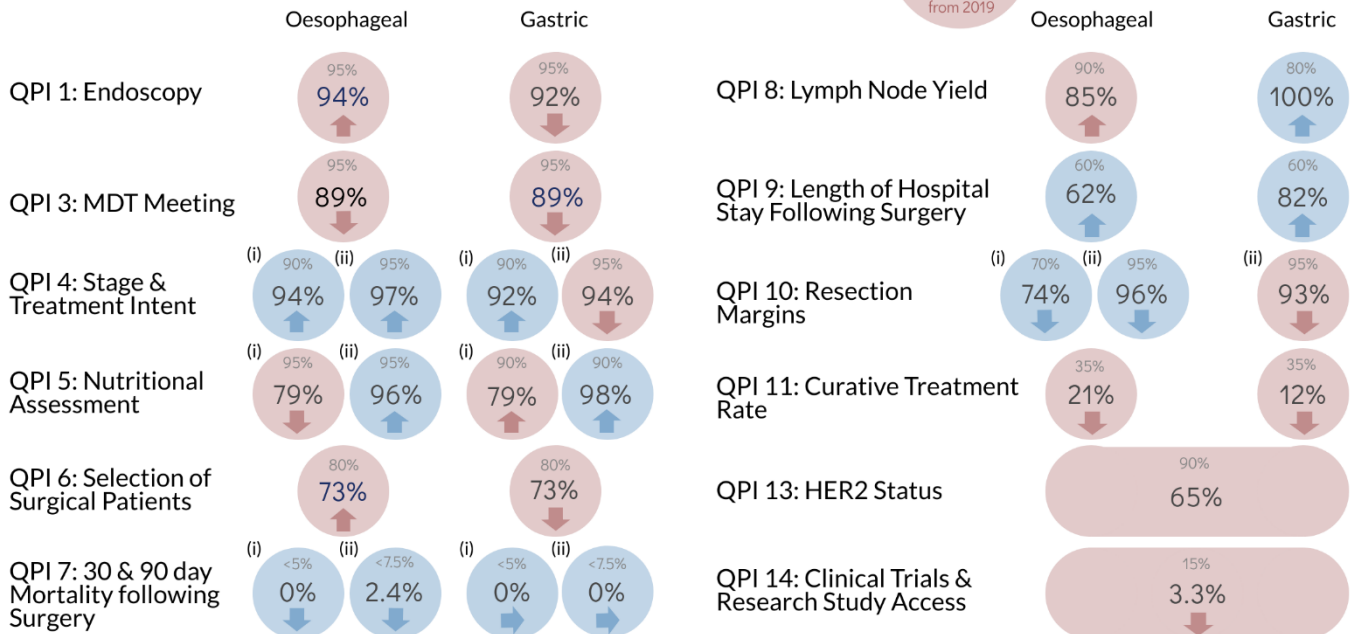
Where are patients diagnosed



Tumour site and morphology

Performance (%)

Target Performance 2020 difference from 2019



Key Achievements:

- Maintenance of service quality through the COVID-19 pandemic in 2020
- Low levels of mortality following surgical resection

Areas for Improvement:

- Timeliness of HER2 test reporting
- Recruitment of patients into clinical trials and research studies



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 2020. Data was measured against v4.0 of the Upper GI Cancer Quality Performance Indicators (QPIs)¹ where possible. This was the eighth 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 will be implemented in this report where possible however it is to report the updated QPIs 4(i), 5(ii) and 9 as data will not be available until next year; these QPIs are reported using the previous v3.0 definitions.

Results

A summary of performance against the Upper GI cancer QPIs for patients diagnosed in 2020 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	Performance by Board						
	Target	Year	A&A	FV	GGC	Lan	WoSCAN
QPI 1: Endoscopy Proportion of patients with oesophageal cancer who have a histological diagnosis made within 6 weeks of initial endoscopy and biopsy.	95%	2020	95%	98%	94%	93%	94%
		2019	95%	90%	92%	95%	93%
		2018	91%	93%	93%	91%	92%
QPI 3: MDT Meeting Proportion of patients with oesophageal cancer who are discussed at MDT meeting before definitive treatment.	95%	2020	89%	91%	93%	77%	89%
		2019	97%	96%	96%	95%	96%
		2018	89%	95%	95%	86%	92%
QPI 4 (i): Staging and Treatment Intent Proportion of patients with oesophageal cancer who have (i) TNM stage recorded at MDT meeting prior to treatment.	90%	2020	93%	98%	97%	88%	94%
		2019	97%	98%	95%	82%	93%
		2018	92%	97%	90%	58%	85%
QPI 4 (ii): Staging and Treatment Intent Proportion of patients with oesophageal cancer who have (ii) treatment intent recorded at MDT meeting prior to treatment.	95%	2020	98%	100%	95%	97%	97%
		2019	98%	96%	95%	98%	96%
		2018	97%	97%	91%	99%	94%
QPI 5 (i): Nutritional Assessment Proportion of patients with oesophageal cancer who undergo nutritional screening with the MUST before first treatment.	95%	2020	71%	80%	77%	89%	79%
		2019	77%	70%	84%	88%	82%
		2018	79%	59%	84%	90%	81%
QPI 5(ii): Nutritional Assessment Proportion of patients with oesophageal cancer at high risk of malnutrition (MUST score of 2 or more) who are referred to a dietitian.	90%	2020	100%	100%	94%	98%	96%
		2019	100%	100%	87%	100%	92%
		2018	100%	100%	92%	100%	96%

Oesophageal Cancer	Performance by Board						
	Target	Year	A&A	FV	GGC	Lan	WoSCAN
QPI 6: Appropriate Selection of Surgical Patients Proportion of patients with oesophageal cancer who receive neo-adjuvant chemotherapy or chemoradiotherapy who then go on to have surgical resection.	80%	2020	-	78%	68%	80%	73%
		2019	86%	78%	64%	38%	67%
		2018	50%	80%	59%	56%	61%
QPI 7 (a)*: 30 day Mortality Following Surgery Proportion of patients with oesophageal cancer who die within 30 days of surgical resection.	< 5%	2020	-	-	0%	0%	0%
		2019	0%	-	5%	-	3%
		2018	-	-	0%	0%	0%
QPI 7 (b)*: 90 day Mortality Following Surgery Proportion of patients with oesophageal cancer who die within 90 days of surgical resection.	< 7.5%	2020	-	-	3%	0%	2%
		2019	0%	-	5%	-	4%
		2018	-	-	0%	0%	0%
QPI 8*: Lymph Node Yield Proportion of patients with oesophageal cancer who undergo surgical resection where ≥15 lymph nodes are resected and pathologically examined.	90%	2020	-	-	80%	100%	85%
		2019	100%	-	74%	-	78%
		2018	-	-	82%	88%	84%
QPI 9*: Length of Hospital Stay Following Surgery Proportion of patients undergoing surgical resection for oesophageal cancer who are discharged within 14 days of surgical procedure.	60%	2020	71%	-	62%	-	62%
		2019	56%	-	52%	29%	50%
		2018	-	-	66%	63%	66%
QPI 10 (i)*: Resection Margins 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%	2020	-	-	80%	43%	74%
		2019	62%	-	84%	-	80%
		2018	-	-	68%	63%	67%
QPI 10 (ii)*: Resection Margins 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%	2020	-	-	94%	100%	96%
	90%	2019	100%	-	98%	-	98%
		2018	100%	-	97%	100%	98%

Oesophageal Cancer	Performance by Board						
	Target	Year	A&A	FV	GGC	Lan	WoSCAN
QPI 11: Curative Treatment Rates Proportion of patients with oesophageal cancer who undergo curative treatment.	35%	2020	10%	29%	23%	17%	21%
		2019	27%	30%	27%	27%	28%
		2018	16%	24%	22%	22%	22%
QPI 13: HER2 Status for Decision Making 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%	2020	78%	-	68%	47%	65%
		2019					
		2018					
QPI 14: Clinical Trials & Research Study Access Proportion of patients diagnosed with Upper GI cancer who are consented for a clinical trial / research study.	15%	2020	0%	2%	3%	3%	3%
		2019	3%	3%	4%	1%	3%
		2018	1%	1%	3%	1%	2%

Gastric Cancer	Performance by Board						
	Target	Year	A&A	FV	GGC	Lan	WoSCAN
QPI 1: Endoscopy Proportion of patients with gastric cancer who have a histological diagnosis made within 6 weeks of initial endoscopy and biopsy.	95%	2020	89%	100%	90%	94%	92%
		2019	97%	92%	95%	94%	95%
		2018	84%	94%	85%	97%	89%
QPI 3: MDT Meeting Proportion of patients with gastric cancer who are discussed at MDT meeting before definitive treatment.	95%	2020	93%	91%	88%	87%	89%
		2019	100%	100%	92%	91%	94%
		2018	100%	88%	92%	88%	92%
QPI 4 (i): Staging and Treatment Intent ** Proportion of patients with gastric cancer who have (i) TNM stage recorded at MDT meeting prior to treatment.	90%	2020	97%	92%	90%	94%	92%
		2019	97%	100%	91%	81%	91%
		2018	96%	89%	90%	48%	80%

Gastric Cancer	Performance by Board						
	Target	Year	A&A	FV	GGC	Lan	WoSCAN
QPI 4 (ii): Staging and Treatment Intent Proportion of patients with gastric cancer who have (ii) treatment intent recorded at MDT meeting prior to treatment.	95%	2020	100%	92%	90%	97%	94%
		2019	100%	100%	95%	92%	95%
		2018	100%	100%	97%	95%	97%
QPI 5 (i): Nutritional Assessment Proportion of patients with gastric cancer who undergo nutritional screening with the MUST before first treatment.	95%	2020	61%	33%	87%	94%	79%
		2019	63%	53%	85%	86%	78%
		2018	62%	39%	84%	85%	75%
QPI 5 (ii): Nutritional Assessment ** Proportion of patients with gastric cancer at high risk of malnutrition (MUST score of 2 or more) who are referred to a dietitian.	90%	2020	100%	-	94%	100%	98%
		2019	100 %	100%	83%	100%	91%
		2018	100%	100%	91%	100%	96%
QPI 6: Appropriate Selection of Surgical Patients Proportion of patients with gastric cancer who receive neo-adjuvant chemotherapy or chemoradiotherapy who then go on to have surgical resection.	80%	2020	-	-	67%	-	73%
		2019	-	-	75%	-	73%
		2018	-	-	67%	-	77%
QPI 7 (a)*: 30 day Mortality Following Surgery Proportion of patients with gastric cancer who die within 30 days of surgical resection.	< 5%	2020	-	-	0%	-	0%
		2019	-	-	0%	0%	0%
		2018	-	-	0%	-	0%
QPI 7 (b)*: 90 day Mortality Following Surgery Proportion of patients with gastric cancer who die within 90 days of surgical resection.	< 7.5%	2020	-	-	0%	-	0%
		2019	-	-	0%	0%	0%
		2018	-	-	8%	-	6%
QPI 8*: Lymph Node Yield Proportion of patients with gastric cancer who undergo surgical resection where ≥15 lymph nodes are resected and pathologically examined.	80%	2020	-	-	100%	-	100%
		2019	-	-	85%	-	90%
		2018	-	-	50%	-	64%

Gastric Cancer	Performance by Board						
	Target	Year	A&A	FV	GGC	Lan	WoSCAN
QPI 9*: Length of Hospital Stay Following Surgery ** Proportion of patients undergoing surgical resection for gastric cancer who are discharged within 14 days of surgical procedure.	60%	2020	-	-	90%	-	82%
		2019	-	-	64%	80%	68%
		2018	-	-	73%	-	60%
QPI 10 (ii)*: Resection Margins 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%	2020	-	-	90%	-	93%
	90%	2019	-	-	100%	100%	100%
		2018	-	-	93%	-	94%
QPI 11: Curative Treatment Rates Proportion of patients with gastric cancer who undergo curative treatment.	35%	2020	0%	0%	19%	11%	12%
		2019	9%	13%	15%	17%	14%
		2018	12%	11%	22%	8%	15%

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

*** v3 measurability used as data not available to report v4 amendments for patients diagnosed in 2020*

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 2020 the COVID-19 pandemic impacted on Upper GI cancer services and resulted in decreases in the numbers of patients diagnosed. Despite this the quality of service provided to patients diagnosed with Upper GI cancer was largely maintained, and in some areas improved, despite the challenges faced across the NHS during this time.
- Low levels of mortality following surgical resection.
- Excellent performance in providing nutritional support to patients where need has been identified.
- Roll out of the endoscopy quality improvement project across the WoS.

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.

Recruitment to clinical trials has historically been low in WoSCAN for patients with Upper GI cancer and fell further in 2020 as all clinical trials were suspended for at least part of the year due to the COVID-19 pandemic. MDTs will work on improving performance in this area by considering both which clinical trials or research studies can be opened for recruitment in the WoS and by ensuring that the MDT discuss the eligibility of each patient for available clinical trials.

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

Actions required:

- All Boards to ensure that patients have Malnutrition Universal Screening Tool (MUST) scores recorded routinely at the first point of contact with the patient.
- WoSCAN to report median length of hospital stay alongside results for QPI 9 for patients diagnosed in 2021.
- MCN to explore the feasibility of undertaking HER2 testing at the time of the index endoscopy with the molecular pathology team so that HER2 results are available in time to inform decisions on palliative chemotherapy treatment.
- All MDTs to keep abreast of current trial availability and ensure active MDT discussions on the suitability of trials for individual patients to maximise recruitment.

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 1st January and 31th December 2020. 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 eighth 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 will be implemented in this report where possible, however it is not possible to report the updated QPIs 4(i), 5(ii) and 9 as data will not be available until next year; these QPIs are reported using the previous v3.0 definitions.

2. Background

Four NHS Boards across the WoS serve the 2.5 million population. There were 558 new cases of Upper GI cancer diagnosed in the WoS in 2020 (414 oesophageal cancer diagnoses and 144 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.

Analysis of the data contained within this report is based on the NHS Board responsible for treatment. Outcome measures regarding the quality of surgical services have been analysed based on the NHS Board where surgery was performed.

2.1 National context

Oesophageal cancer is the eleventh most common cancer in Scotland with 841 cases diagnosed nationally in 2019². There has been a decrease in the incidence of oesophageal cancer from 2009 to 2019 of 13%². Oesophageal cancer is more common in males with just over two thirds of cases occurring in males in 2019. National analysis of the wider impacts of the COVID-19 pandemic identified a 31% decrease in the number of patients diagnosed with oesophageal cancer in April – June 2020 following the first national lockdown; despite rates of diagnosis returning to near normal levels after this period the result was a 7% decrease in numbers of patients diagnosed in 2020 compared with 2019³.

Gastric cancer is the thirteenth most common cancer in Scotland with 659 cases diagnosed nationally in 2019². The incidence of gastric cancer in Scotland has fallen significantly, with a 31% decrease in incidence between 2009 and 2019. As with oesophageal cancer there is a higher incidence of gastric cancer in men. National analysis of the wider impacts of the COVID-19 pandemic identified a 39% decrease in the number

of patients diagnosed with gastric cancer in April – June 2020 following the first national lockdown and a 36% decrease compared with 2019 in the following quarter (July – September) resulting in a 24% decrease in numbers of patients diagnosed in 2020 compared with 2019³

The mortality rate for gastric cancer has seen the most significant decrease of any cancer type, showing a 33% decrease in mortality rates between 2009 and 2019². Mortality rate for oesophageal cancer decreased by 9% over this period², 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 increasing⁴. 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.

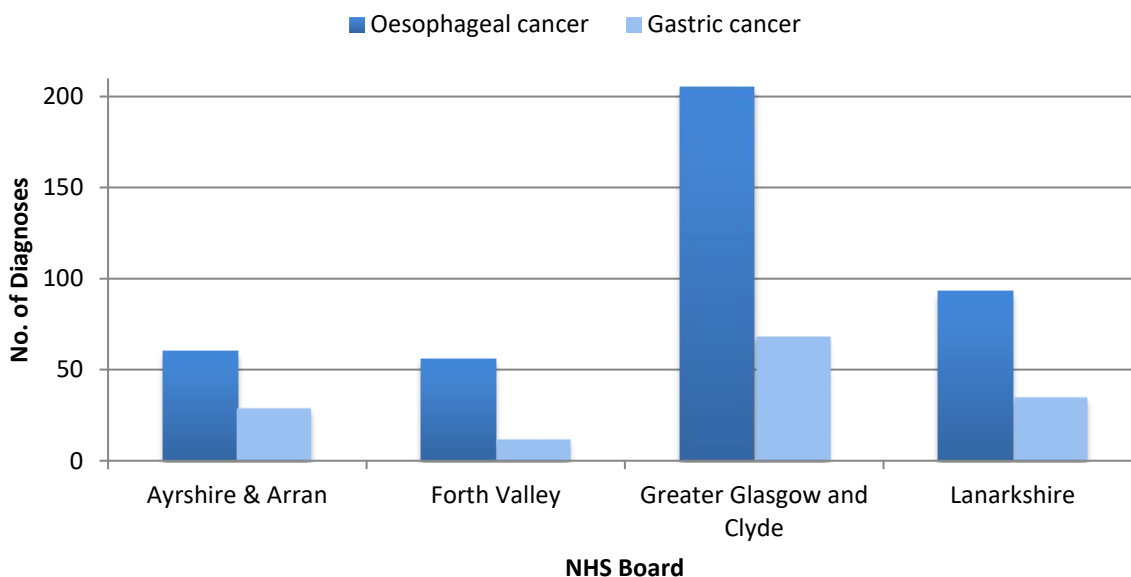
Table 1: Net non-age-standardised survival for oesophageal and gastric cancers in Scotland at 1 year and 5 years showing percentage change from 1993-1997 to 2013-2017⁴

		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 2020 there were 558 new cases of oesophagogastric cancer identified through audit as having been managed in the WoS, a decrease on 2019 when 622 patients were diagnosed. The roughly 10% decrease in numbers of patients diagnosed in 2020 is likely to have been due to the impact of the COVID-19 pandemic, although this decrease was not uniform across the West of Scotland and was greatest in NHS GGC. The number managed through 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 2020 with oesophageal or gastric cancer by NHS Board of diagnosis.



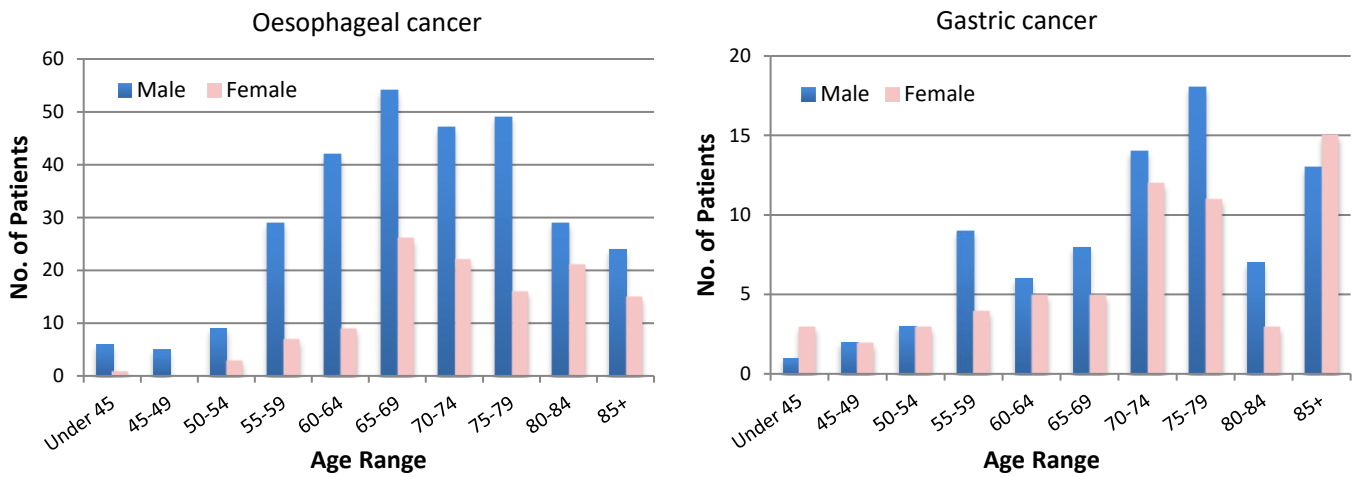
	AA	FV	GGC	Lan	WoS
Oesophageal cancer	60	56	205	93	414
Gastric cancer	29	12	68	35	144
Total	89	68	273	128	558

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 50% of all Upper GI cancer diagnoses in the WoS in 2020.

- 278 Oesophageal adenocarcinoma (50%)
- 98 Oesophageal squamous cell carcinoma (18%)
- 124 Gastric adenocarcinoma (22%)
- 0 Gastric squamous cell carcinoma (0%)
- Morphology not assessable / not recorded 58 (10%)

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 56% of cases respectively) than in females (29% and 44% of cases respectively).

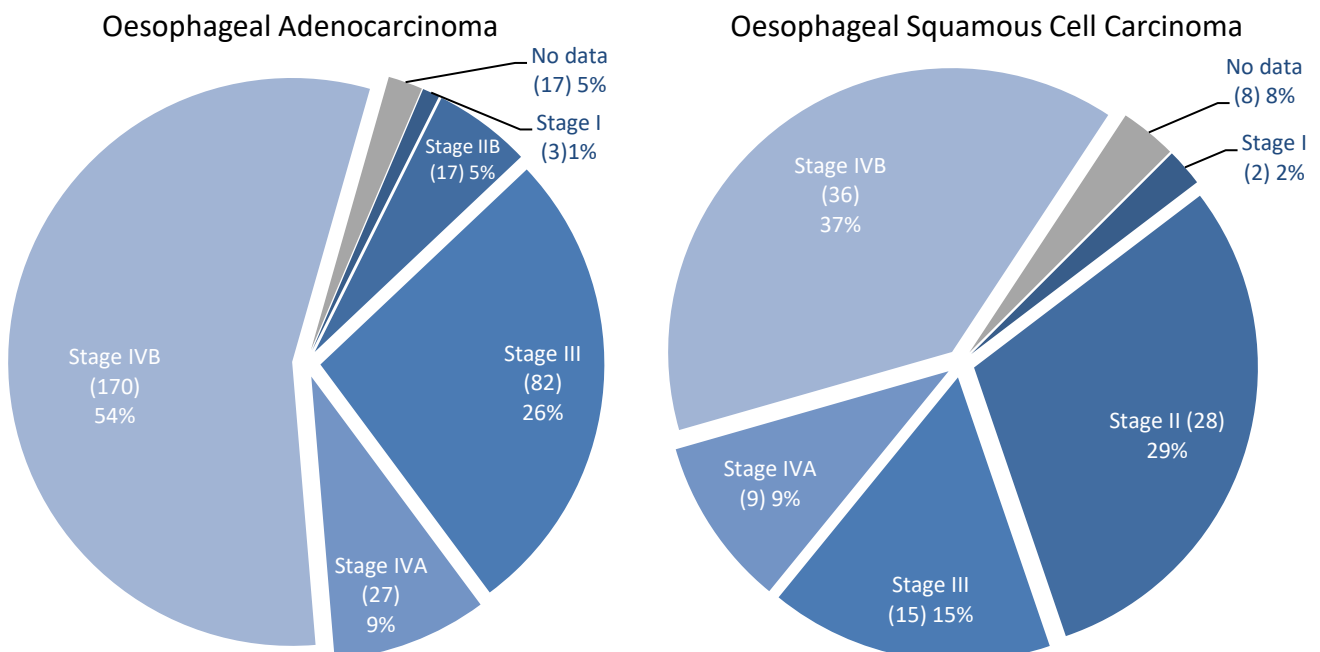
Figure 2: Number of patients diagnosed in 2020 with oesophageal and gastric cancer in WoS within each age group.



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 2020. Figure 3 shows the distribution of oesophageal cancers by clinical stage, indicating that most patients present with advanced disease.

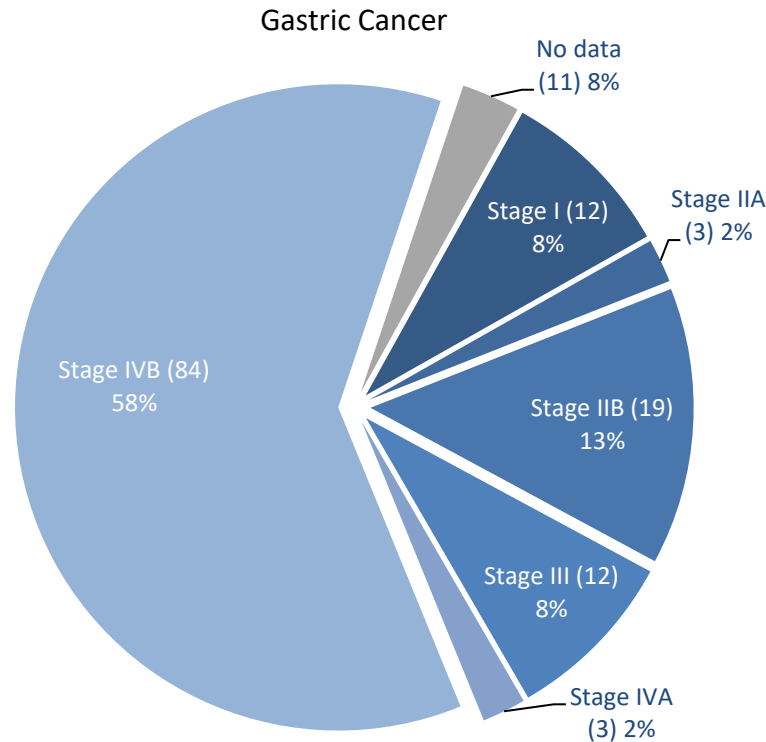
Figure 3: Clinical Stage of oesophageal adenocarcinomas and oesophageal squamous cell carcinomas for patients diagnosed in 2020



Staging could not be applied to all diagnoses as for some patients the recording of T, N and M staging was not applicable (9 patients), not fully recorded (8 patients) or was recorded as Tx or Nx (8 patients), this was a slight improvement from 2019.

Figure 4 shows the distribution of gastric cancers by clinical stage, again indicating the predominance of advanced stage disease. For gastric cancer 11 patients were not staged; for some patients the recording of T, N and M staging was not applicable (4 patients), not fully recorded (4 patients) or recorded as Tx or Nx (3 patients). Again this was a slight improvement on 2019 figures.

Figure 4: Clinical Stage of gastric cancers for patients diagnosed in 2020



In addition 18 oesophageal cancer patients and 11 gastric cancer patients with M0 disease had their tumour recorded as T4 without specification of whether this was T4a or T4b. These patients were staged as if they had T4a cancer. Changes to the way TNM data is recorded within cancer audit will be implemented for patients diagnosed from the 1st January 2021 which should increase the number of patients where clinical stage information is available.

Comparison of staging data with that for 2019 suggests that while the numbers of patients presenting with Stage IV disease was similar in 2020 and 2019, due to a decrease in the numbers of patients presenting with stage I – III disease, the proportion of patients with stage IV disease (out of all patients where stage could be calculated) increased from 57% to 63%. 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.

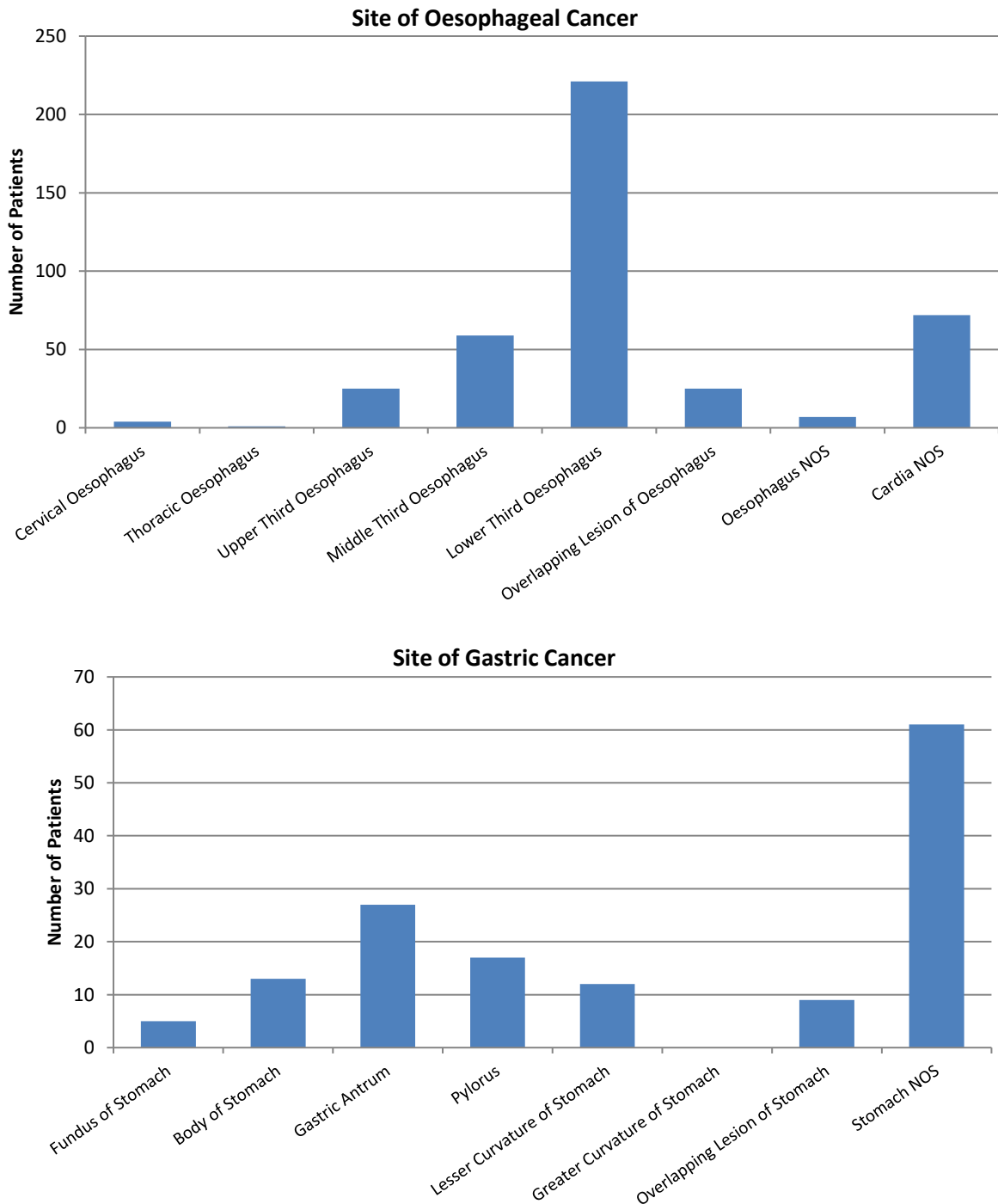


Figure 5 displays the breakdown by site of tumour for oesophageal and gastric cancer patients and illustrates that the majority (53%) of oesophageal cancers diagnosed in 2020 occurred in the lower third oesophagus while gastric cancers were more evenly distributed across different sites, with over a third (42%) 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 53 patients (41%) in NHS Lan. From early 2021 clinical staff in NHS Lanarkshire have been discussing and

recording the Performance Status at MDT routinely for all patients, which should result in an improvement in recording for patients diagnosed in 2021.

Figure 6: SIMD percentile for Upper GI patients

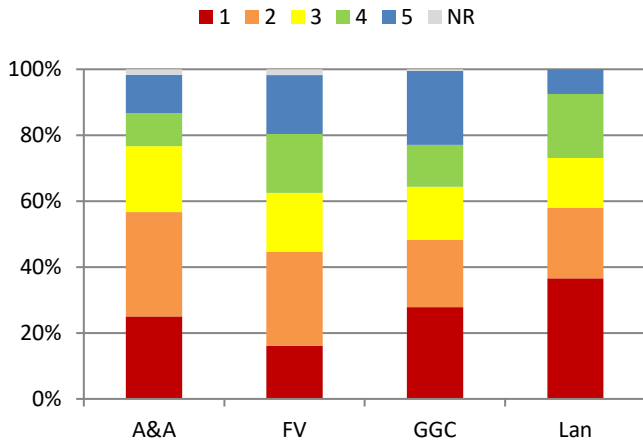
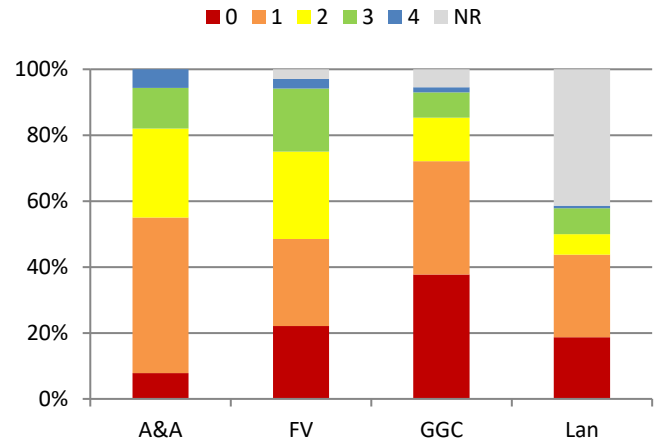


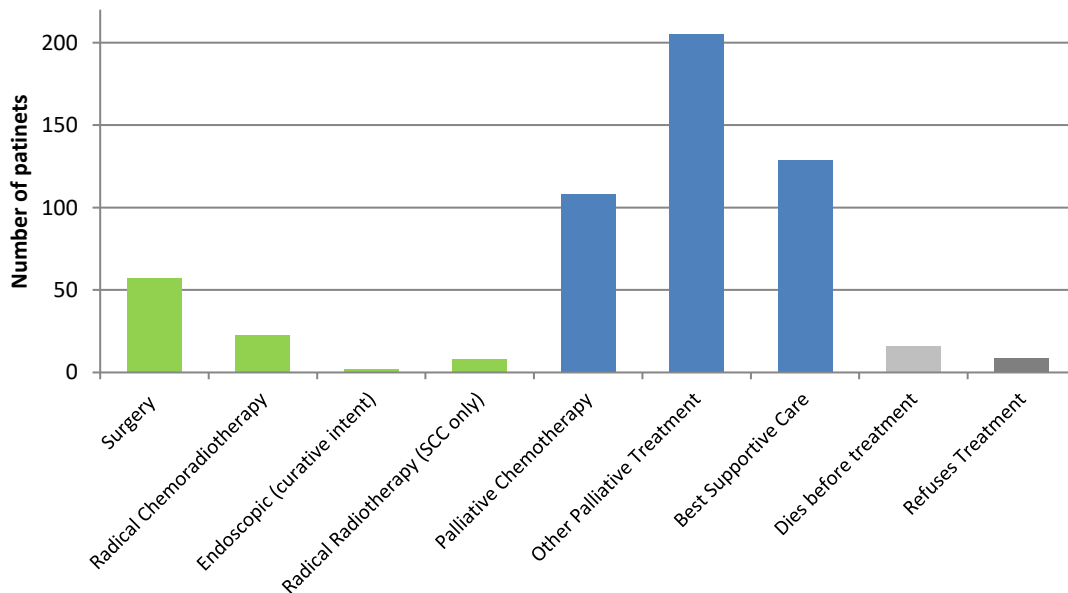
Figure 7: WHO Performance Status for Upper GI patients



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 16% of patient received curative treatment in 2020 with the majority of patients receiving palliative treatment. This curative treatment rate is lower than in 2019 (22%) and this difference is likely to be due to the COVID-19 pandemic, which has resulted in patients presenting with more advanced stage disease in at least some WoS areas as well as affecting some treatment decisions; for example small numbers of patients received chemoradiotherapy rather than undergoing surgery in line with agreed emergency COVID-19 management guidelines.

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.

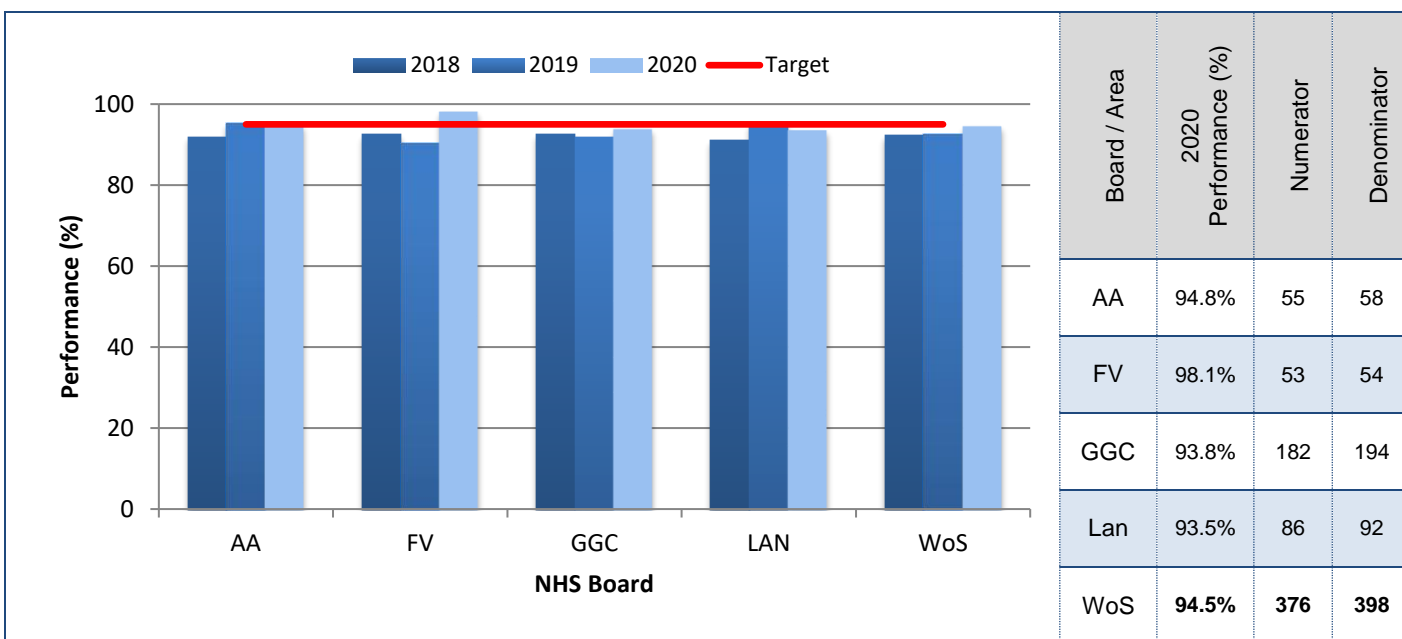
Specific regional and NHS Board actions have been identified to address issues highlighted through the data analysis.

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 reported¹. The tolerance within the 95% target is designed to account for factors of patient choice.

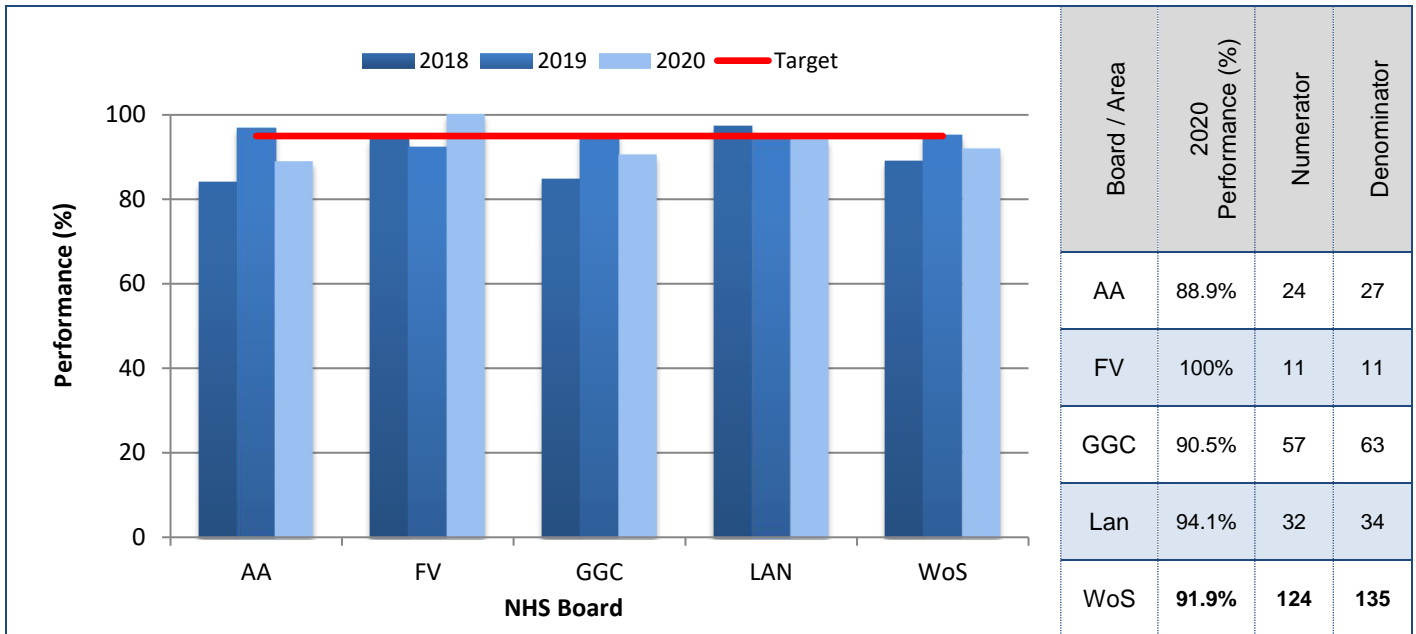
QPI 1:	Patients with oesophageal or gastric cancer should undergo endoscopy and biopsy to reach a diagnosis of cancer.
Numerator:	Number of patients with oesophageal or gastric cancer who undergo endoscopy who have a histological diagnosis made within 6 weeks of initial endoscopy and biopsy.
Denominator: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

Oesophageal Cancer



Of the 398 oesophageal patients who underwent endoscopy, 376 had a histological diagnosis within 6 weeks of initial endoscopy and biopsy resulting in a WoS performance of 94.5%. NHS Forth Valley achieved the target and performance was above 90% in all boards.

Gastric Cancer



Overall WoS results show that 91.9% of patients with gastric cancer had a histological diagnosis within 6 weeks of initial endoscopy and biopsy; below the target of 95%. One NHS Board, NHS Forth Valley, 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. NHSGGC noted that patients not meeting the QPI were progressed on the cancer pathway following endoscopy despite pathology being inconclusive and therefore treatment decisions were not affected by any delays to, or lack of, histological diagnosis. In NHS Ayrshire & Arran and NHS Lanarkshire the majority of patients did ultimately have a histological diagnosis. Some patients had delays to repeat endoscopy due to the COVID-19 pandemic or because of complex diagnostic pathways, while re-biopsy was not always considered to be in the patients best interest for some patients not suitable for treatment other than supportive care.

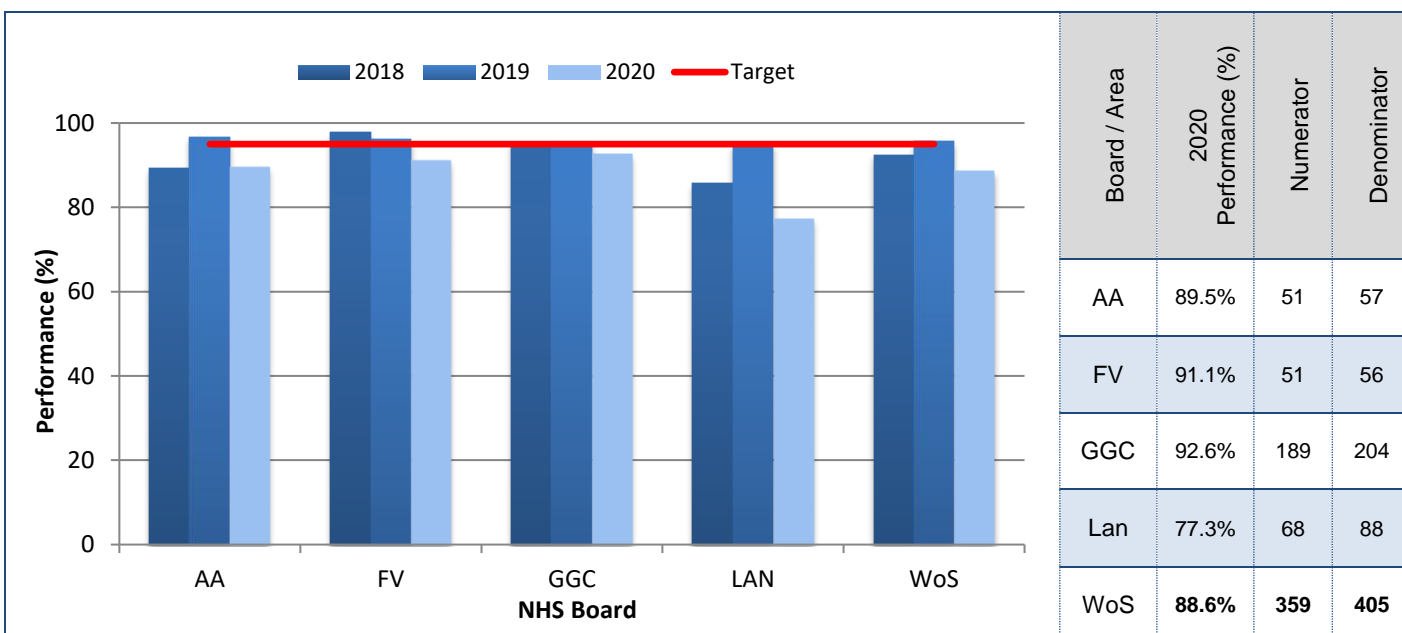
NHSGGC and NHS Lanarkshire continue to implement their endoscopy plan with posters being placed in endoscopy units outlining optimal lesion sampling. It is anticipated that these improvements will result in the continued improvement in performance against this QPI.

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 care¹. Discussion prior to definitive treatment decisions being made provides reassurance that patients are being managed appropriately¹. The tolerance within this QPI accounts for situations where patients require surgery or other intervention urgently.

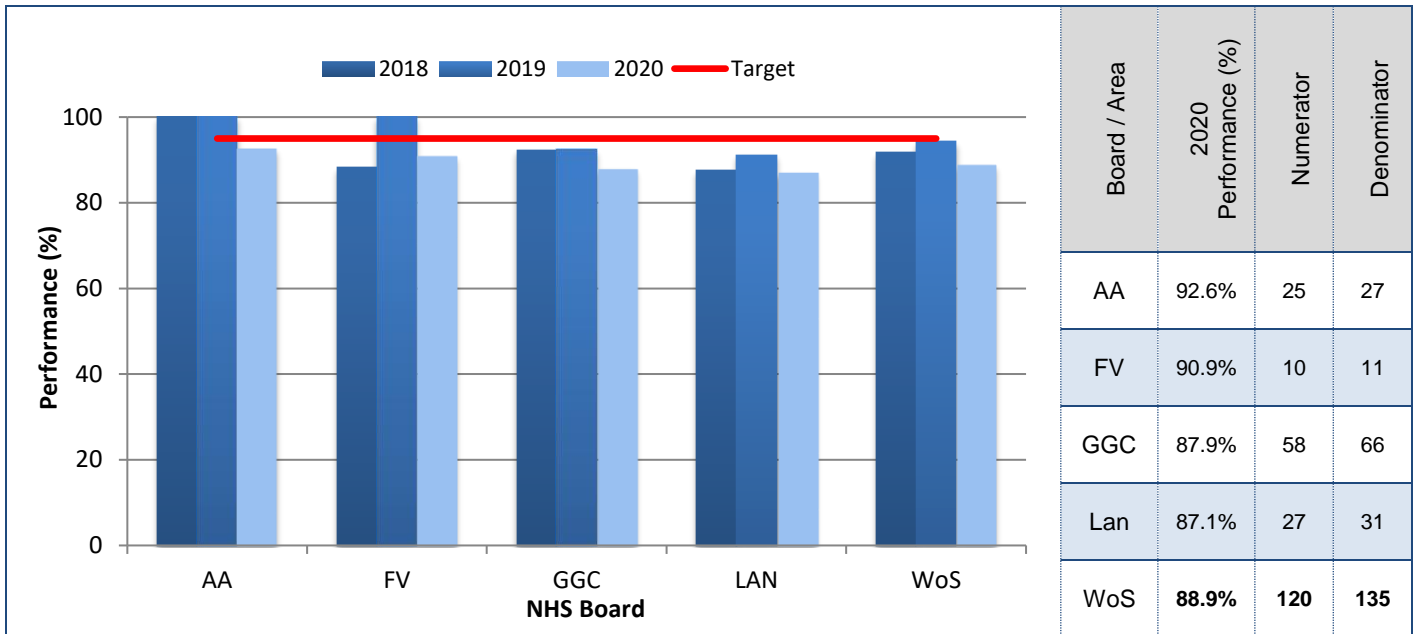
QPI 3:	Patients should be discussed by a multidisciplinary team prior to definitive treatment.
Numerator:	Number of patients with oesophageal or gastric cancer discussed at the MDT before definitive treatment.
Denominator:	All patients with oesophageal and gastric cancer.
Exclusions:	Patients who died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

Oesophageal Cancer



Of the 405 patients across the region with oesophageal cancer who were measured against this QPI, 359 were discussed at MDT prior to definitive treatment. This equates to 88.6%, below the 95% QPI target. Performance in 2020 was lower than in previous years with no NHS Boards meeting the target.

Gastric Cancer



Of the 135 patients with gastric cancer, 120 were recorded as having been discussed at the MDT prior to definitive treatment, resulting in a WoS performance of 88.9%, below the 95% QPI target. As with oesophageal cancer patients, performance in 2020 was lower than in previous years with no NHS Boards meeting the target.

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 while in NHSGGC 5 oesophageal cancer patients also died before they were discussed at MDT.

NHS Ayrshire & Arran noted that there had been an increase in patients presenting as an emergency in 2020 due to the COVID-19 pandemic. NHS Lanarkshire also noted that many of the urgent endoscopic interventions took place at the start of the COVID pandemic when there was significant restructuring of General Surgery services within the Board and an increase in urgent outpatient and emergency inpatient endoscopy with the aim of keeping patients out of hospital where possible. It should be noted that following review of all cases in NHS Lanarkshire, endoscopic palliation that was undertaken was felt to be appropriate and no patients were denied curative or further palliative treatment as a result of the endoscopy. NHS Lanarkshire will continue to reaffirm to the MDT the importance of patients being discussed at the MDT meeting prior to treatment where possible, and ensure that where informal clinician discussions take place that the details are recorded on the MDT outcome.

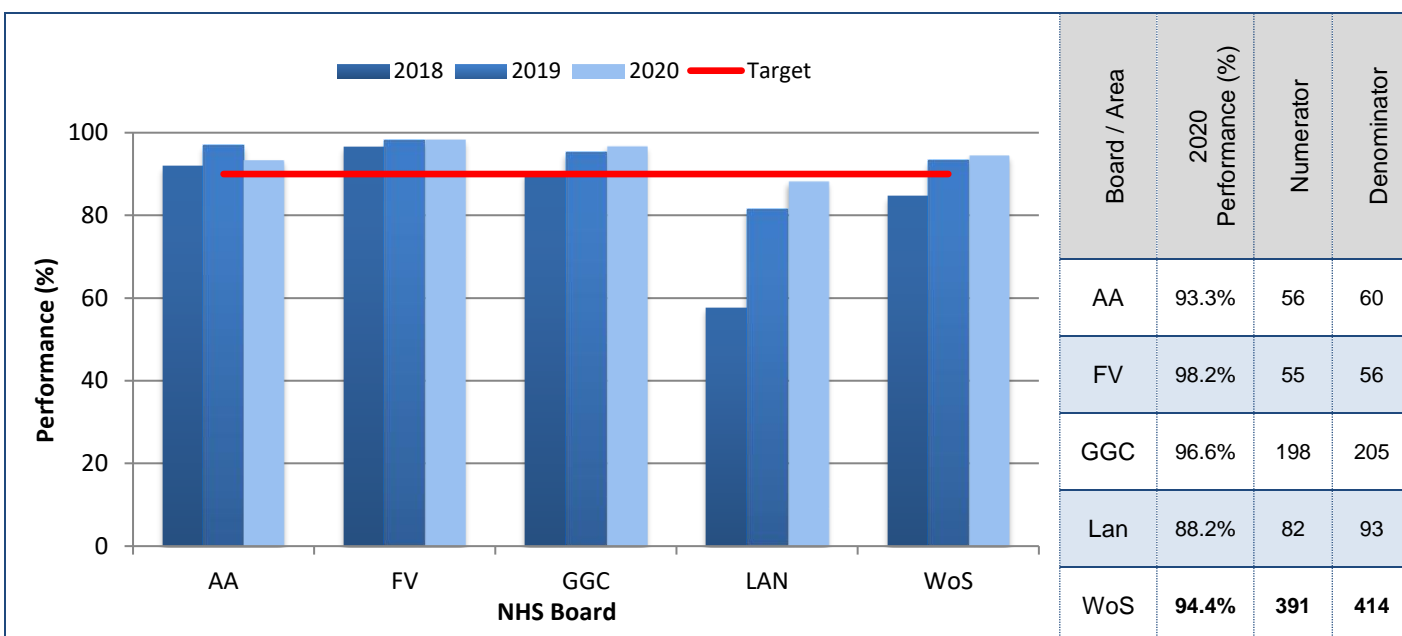
The observations of increases in emergency presentations noted by NHS Ayrshire & Arran and NHS Lanarkshire during the pandemic are supported by data from other sources which highlight a significant increase in the proportion of referrals coming from acute admissions during the pandemic; patients presenting as an emergency / acute admission are more likely to require emergency treatment prior to MDT discussion. This is likely to be the cause of the decrease in performance against this QPI across the WoS in 2020 with performance expected to return to at least pre-covid levels in future.

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 making¹. 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 situation¹.

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

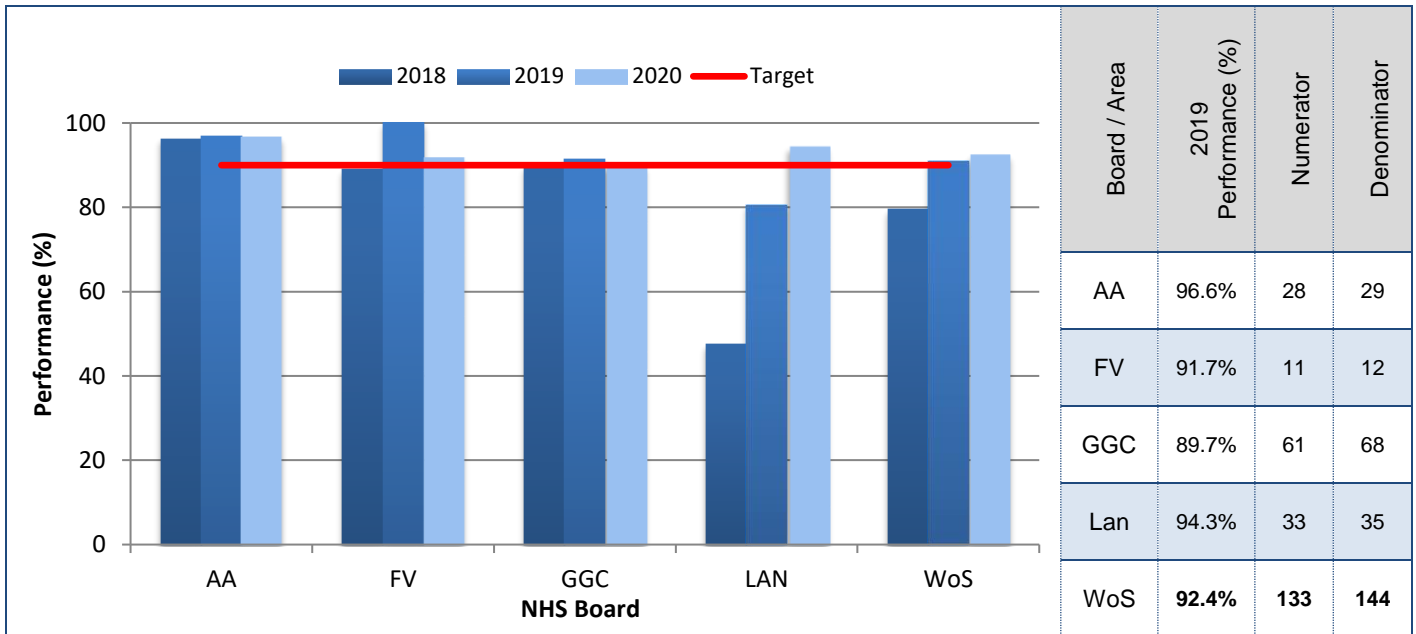
Oesophageal Cancer



The 90% target for QPI 3 was achieved for patients diagnosed with oesophageal cancer in WoS in 2020; of 414 oesophageal patients 391 had TNM stage data recorded at MDT prior to treatment. Three of the four Boards achieved the 90% QPI target.

While NHS Lanarkshire failed to meet this QPI target, the Board have shown a marked improvement in performance from 2018 and 2019 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. It is anticipated that there will be further improvements in performance against this QPI in 2021 due to these changes and the Boards ongoing emphasis on the importance of recorded TNM.

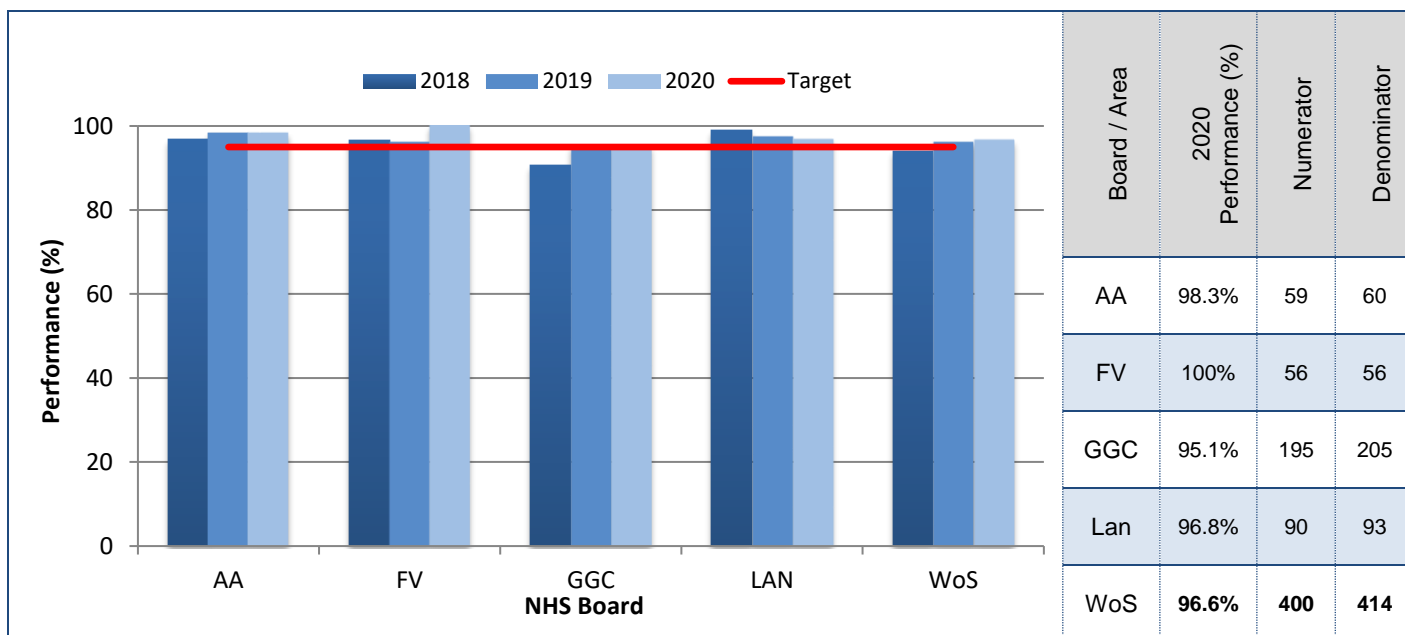
Gastric Cancer



Overall, 133 of the 144 patients diagnosed with gastric cancer in the WoS had TNM staging recorded at MDT meeting prior to treatment, resulting in a performance of 92.4% which meets the 90% target and is an improvement on previous years; 3 of the 4 NHS Boards also meet this target, which was only very narrowly missed by NHSGGC. There has been a considerable improvement in performance by NHS Lanarkshire over recent years due to improved recording with the new electronic MDT system. Within NHSGGC the majority of patients not meeting the QPI were patients who died before full clinical staging could be undertaken.

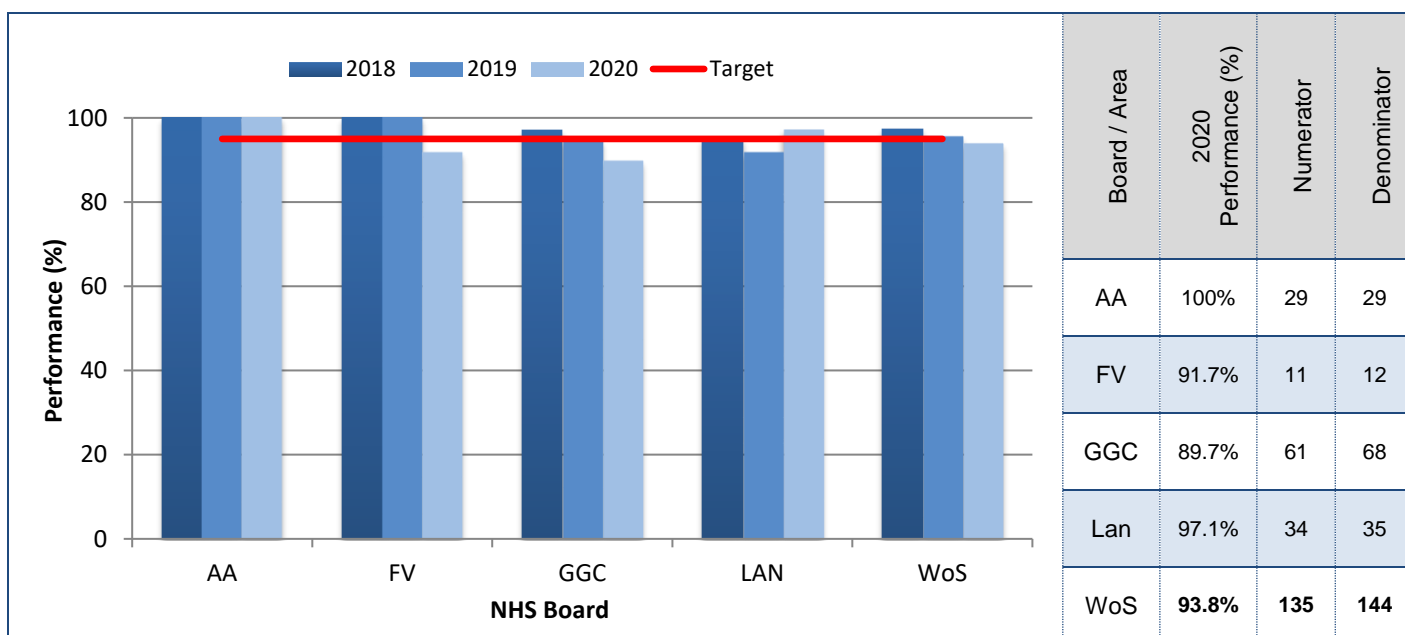
QPI 4(ii):	Patients with oesophageal or gastric cancer should have treatment intent recorded at MDT prior to treatment commencing.
Numerator:	Number of patients with oesophageal or gastric cancer who treatment intent recorded at MDT prior to treatment.
Denominator:	All patients with oesophageal and gastric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

Oesophageal Cancer



Of the 414 patients diagnosed with oesophageal cancer, 400 had treatment intent recorded at MDT prior to treatment. This equates to a WoS performance of 96.6% against the 95% QPI target with all NHS Boards also achieving this target.

Gastric Cancer



Overall performance across the WoS against this indicator was below target at 93.8%, with 135 of the 144 gastric cancer patients having treatment intent recorded at MDT meeting prior to treatment. Two of the 4 NHS Boards met the 95% target.

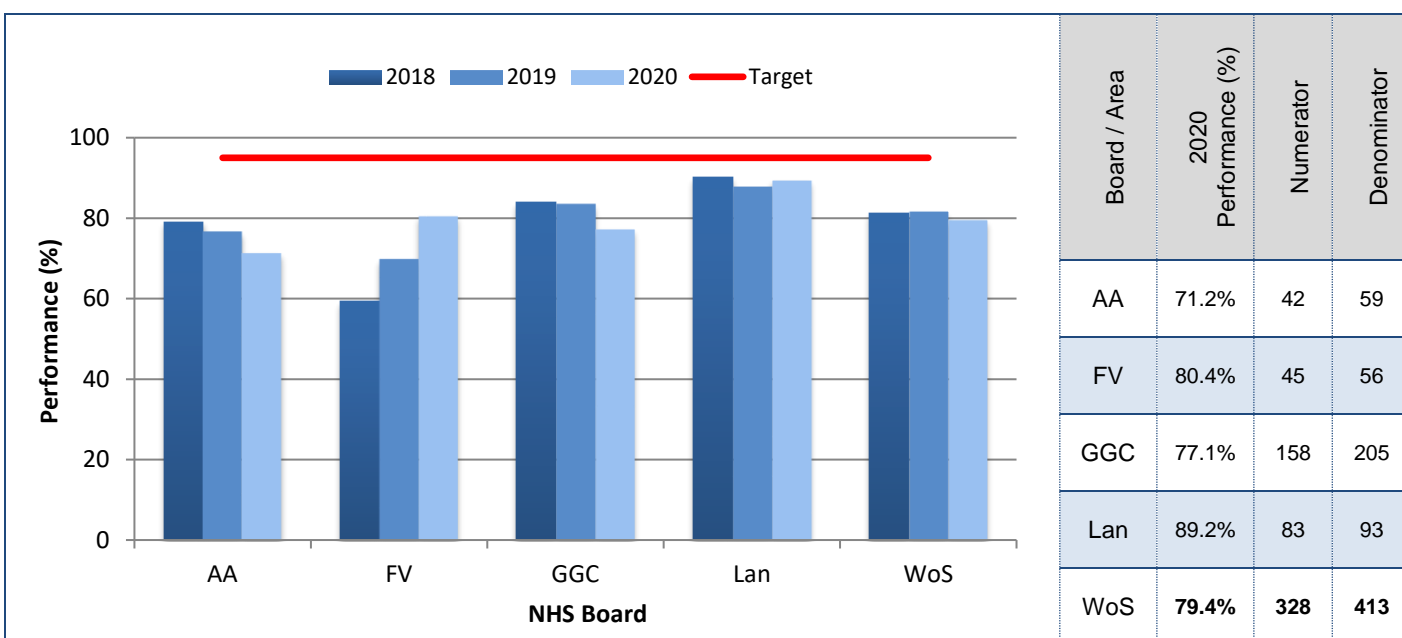
Cases where treatment intent was not recorded were reviewed in NHS Forth Valley and NHSGGC; in all cases patients had either died before MDT discussion or discussion was deemed inappropriate as patients were receiving end of life care.

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 advice¹. 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 stay¹.

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

Oesophageal Cancer



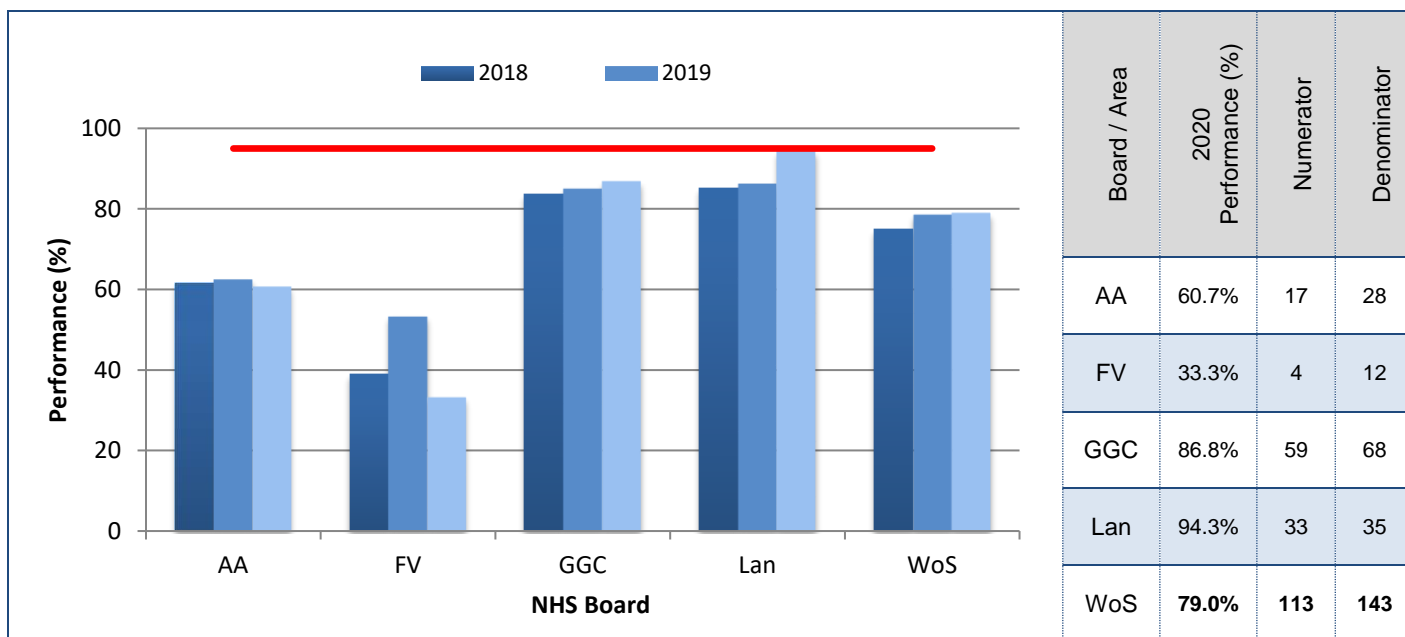
The 95% target for QPI 5 was not achieved for the third consecutive year. In the WoS 79.4% of oesophageal patients underwent nutritional screening prior to first treatment. No board met the target.

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, most notably in NHS Lan, one fifth of patients did not have a MUST score recorded before treatment. Performance in the WoS is similar to other regions in Scotland. Approximately half of the patients not meeting this QPI 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 dietitian, 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 to the recording of MUST scores over the last year, for example the institution of a new protocol in NHS Forth Valley, however the effect of these changes will not be seen in the QPI results until the next reporting cycle

Action Required:

- All Boards to ensure that patients have **MUST** scores recorded routinely at the first point of contact with the patient.

Gastric Cancer

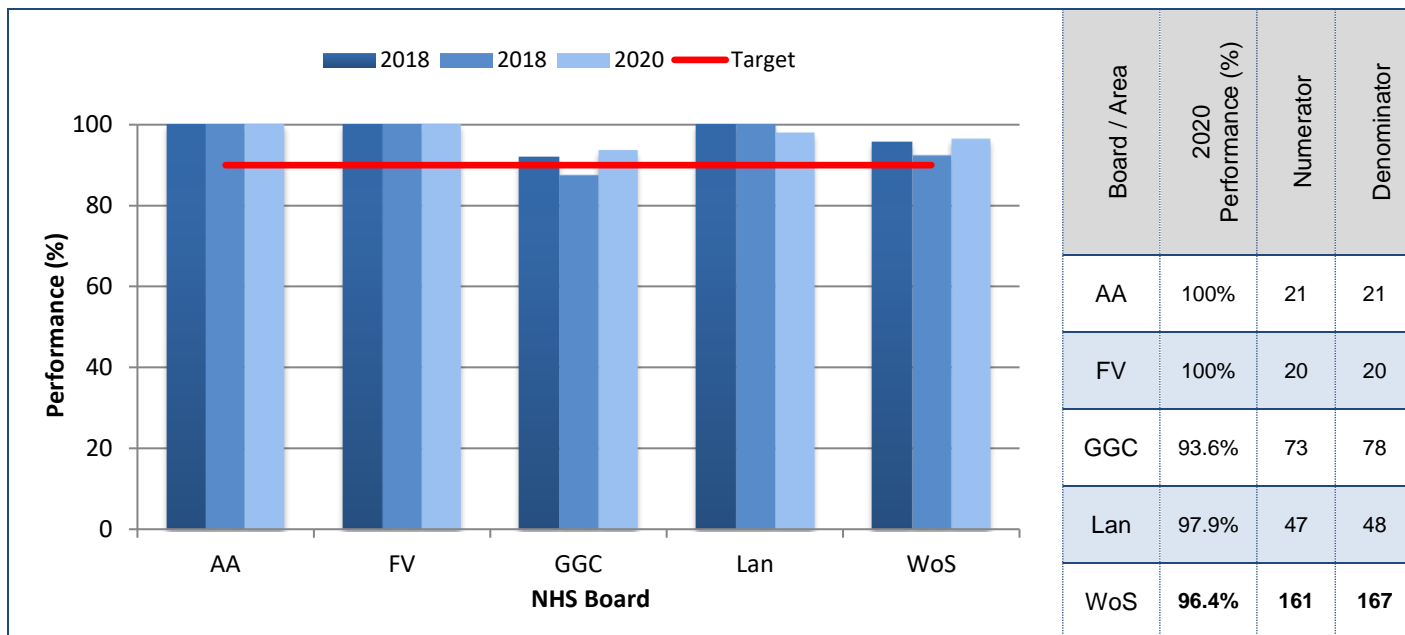


Across the WoS 79.0% of patients diagnosed with gastric cancer underwent nutrition screening prior to first treatment. No Board achieved the QPI with performance ranging from 33.3% in NHS Forth Valley to 94.3% in NHS Lanarkshire, however performance in NHS Lanarkshire was an improvement on previous years and very close to the target.

Feedback from boards reflects the comments made previously for patients with oesophageal cancer and actions currently being implemented should result in improvements against this QPI for gastric cancer patients as well as those with oesophageal cancer.

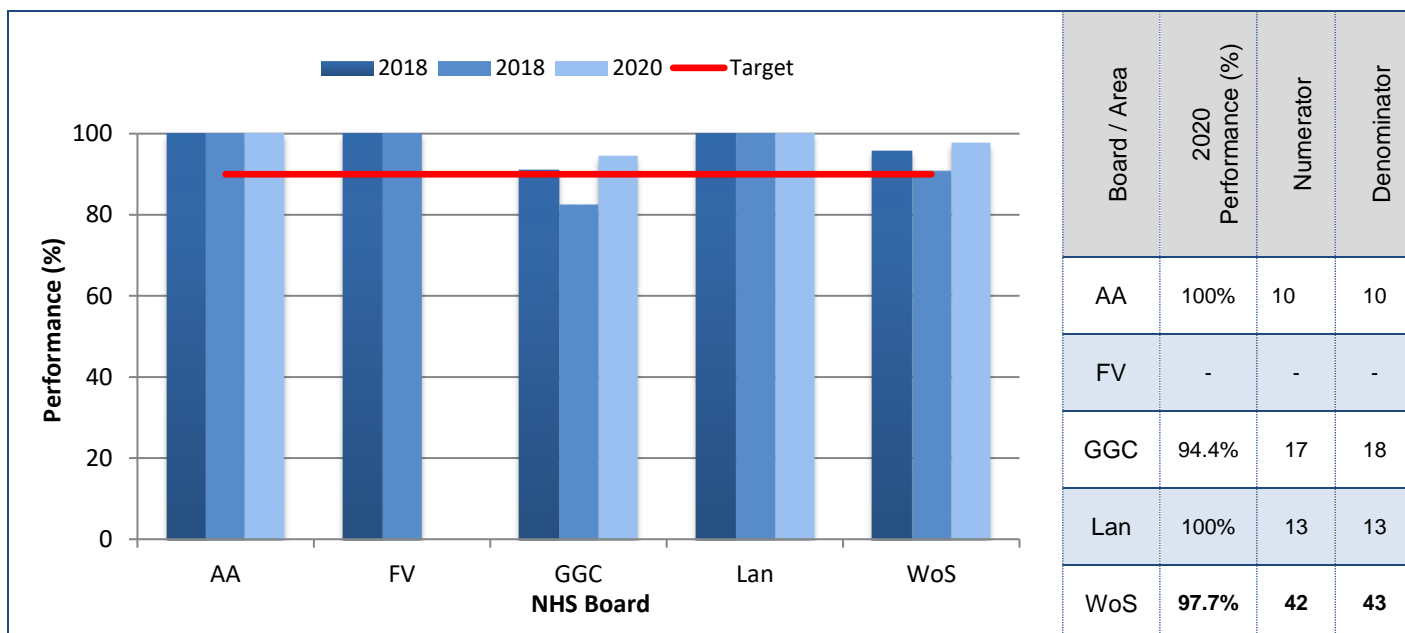
QPI 5(ii):	Patients with oesophageal or gastric cancer should be appropriately assessed by a dietitian to optimise nutritional status.
Numerator:	Number of patients with oesophageal or gastric cancer at high risk of malnutrition (MUST score of 2 or more) who are referred to a dietitian.
Denominator: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

Oesophageal Cancer



Overall in the WoS of the 167 patients with oesophageal cancer at high risk of malnutrition (MUST score of 2 or more), 96.4% (161) were referred to a dietician, achieving the 90% QPI target for the fourth consecutive year. All Boards within WoSCAN achieved the QPI target in 2020.

Gastric Cancer



Across WoS, 97.7% of patients with gastric cancer at high risk of malnutrition were referred to a dietician, which successfully meets the 90% QPI target for the fourth consecutive year with all Boards achieving the QPI target.

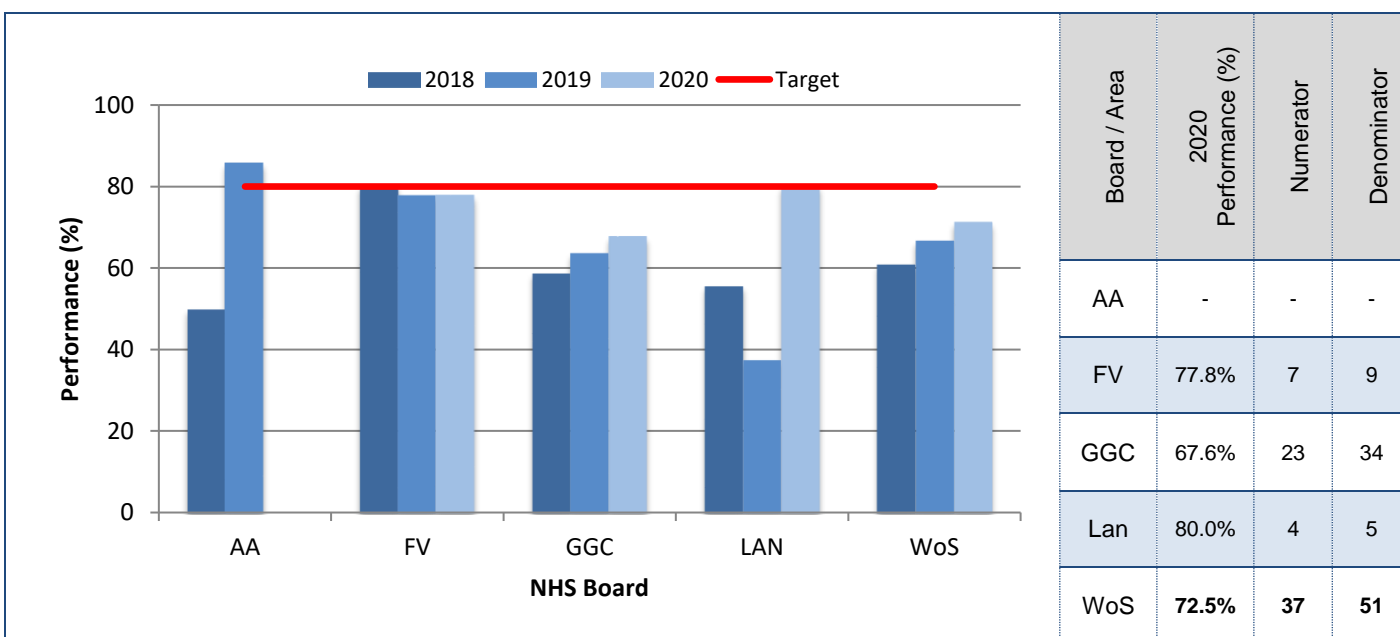
Following the recent Formal Review of Upper GI QPIs, this specification has been amended to measure whether patients are assessed by dietetics, rather than being referred. Information on whether patients have been assessed by dietetics is not available for patients diagnosed in 2020 and as such the revised, and more challenging, specification will be reported for patients diagnosed from January 2021.

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 disease¹.

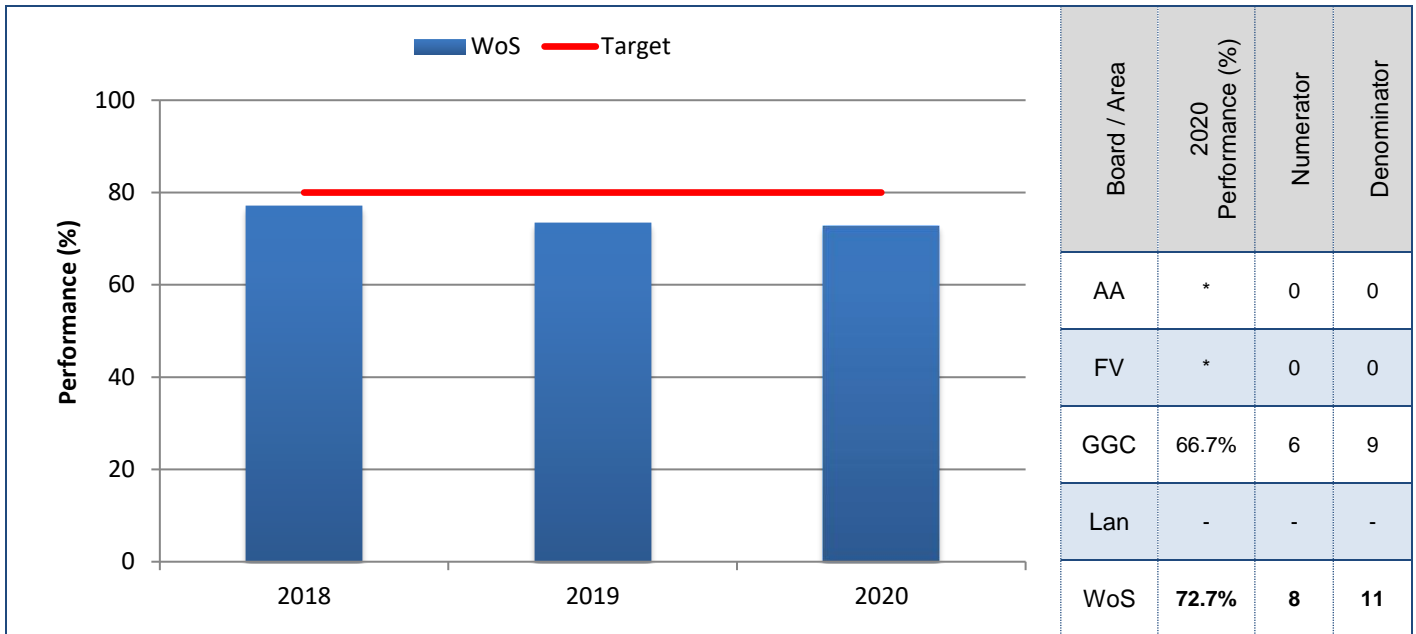
QPI 6:	Patients with oesophageal or gastric cancer whose treatment plan is neoadjuvant chemotherapy or chemoradiotherapy followed by surgery should progress to surgery following completion of this treatment.
Numerator:	Number of patients with oesophageal or gastric cancer who receive neoadjuvant chemotherapy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

Oesophageal Cancer



Across WoS, 72.5% of patients diagnosed with oesophageal cancer who received neo-adjuvant chemotherapy or chemoradiotherapy went on to have surgical resection in 2020 with only NHS Ayrshire & Arran and NHS Lanarkshire achieving the 80% target. 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 also be made with caution.

Gastric Cancer



Due to the small numbers included within the denominator the figure above shows results at a regional level. Across the WoS 72.7% of gastric cancer patients that received neo-adjuvant chemotherapy went on to have surgical resection which is below the 80% QPI target.

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; in addition one oesophageal cancer patient in NHSGGC had treatment changed to chemoradiotherapy due to the COVID-19 pandemic. 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. This QPI is intended to ensure treatment is given appropriately¹.

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

Oesophageal Cancer

Board / Area	30 Day Mortality					90 Day Mortality				
	2020 Performance	Numerator	Denominator	2019 Performance	2018 Performance	2020 Performance	Numerator	Denominator	2019 Performance	2018 Performance
AA	-	-	-	0%	-	-	-	-	0%	-
FV	*	0	0	-	-	*	0	0	-	-
GGC	0%	0	34	4.8%	0%	3.0%	1	33	5.4%	0%
Lan	0%	0	7	-	0%	0%	0	6	-	0%
WoS	0%	0	45	3.4%	0%	2.4%	1	42	3.8%	0%

Within the WoS, there were no deaths within 30 days of surgical resection for oesophageal cancer and one death recorded within 90 days (2.4%) with both the 30 and 90 day target were met for this QPI at an NHS Board and regional level.

Gastric Cancer

Board / Area	30 Day Mortality					90 Day Mortality				
	2020 Performance	Numerator	Denominator	2019 Performance	2018 Performance	2020 Performance	Numerator	Denominator	2019 Performance	2018 Performance
AA	*	0	0	-	-	*	0	0	-	-
FV	*	0	0	-	-	*	0	0	-	-
GGC	0%	0	10	0%	0%	0%	0	10	0%	7.7%
Lan	-	-	-	0%	-	-	-	-	0%	-
WoS	0%	0	14	0%	0%	0%	0	13	0%	6.3%

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.

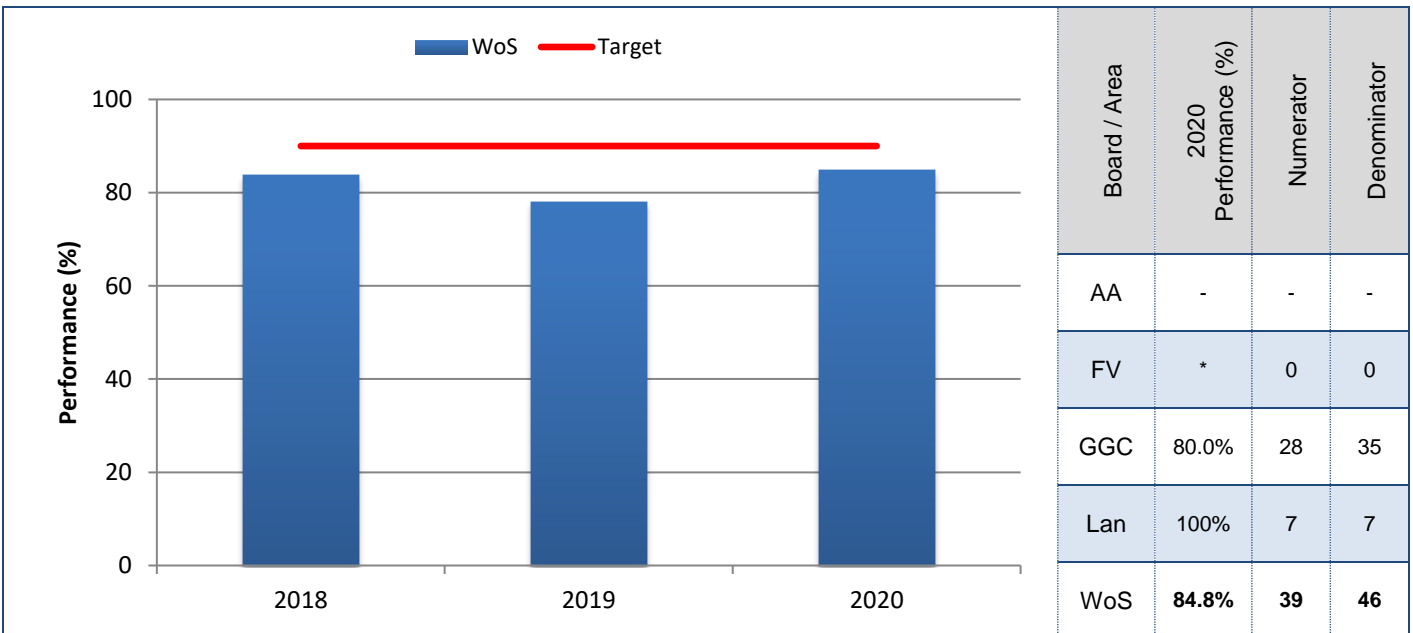
QPI 8: Lymph Node Yield

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 pathologist¹.

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 palliation¹.

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

Oesophageal Cancer



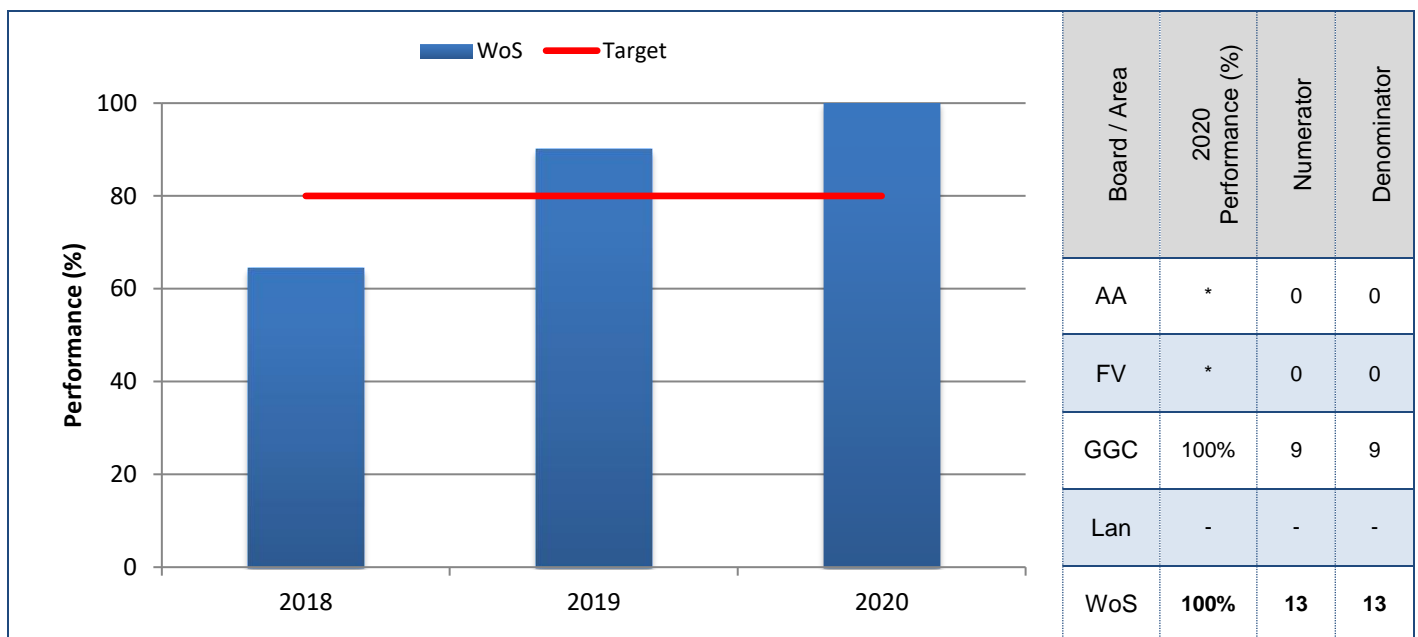
Of the 46 oesophageal patients who underwent surgical resection, 39 had ≥ 15 lymph nodes resected and pathologically examined. This equates to a rate of 84.8% which is below the target rate of 90%. Due to the small numbers in individual boards overall WoS figures are displayed.

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.

During 2020, 7 patients had less than 15 lymph nodes examined. Six of these operations were trans hiatal oesophagectomies (THO), a procedure increasingly adopted during the COVID-19 pandemic to minimise the thoracic insult and reduce pressure on Intensive Care Units. In the majority of these cases, the failure to achieve 15 lymph nodes was only by a small number. The increase in the utilisation of the THO approach has been short term; with more radical approaches now being increasingly used.

Gastric Cancer



Of the 13 patients with gastric cancer undergoing surgical resection, 13 had 15 or more lymph nodes resected and pathologically examined; this resulted in a WoS performance of 100% against the 80% target.

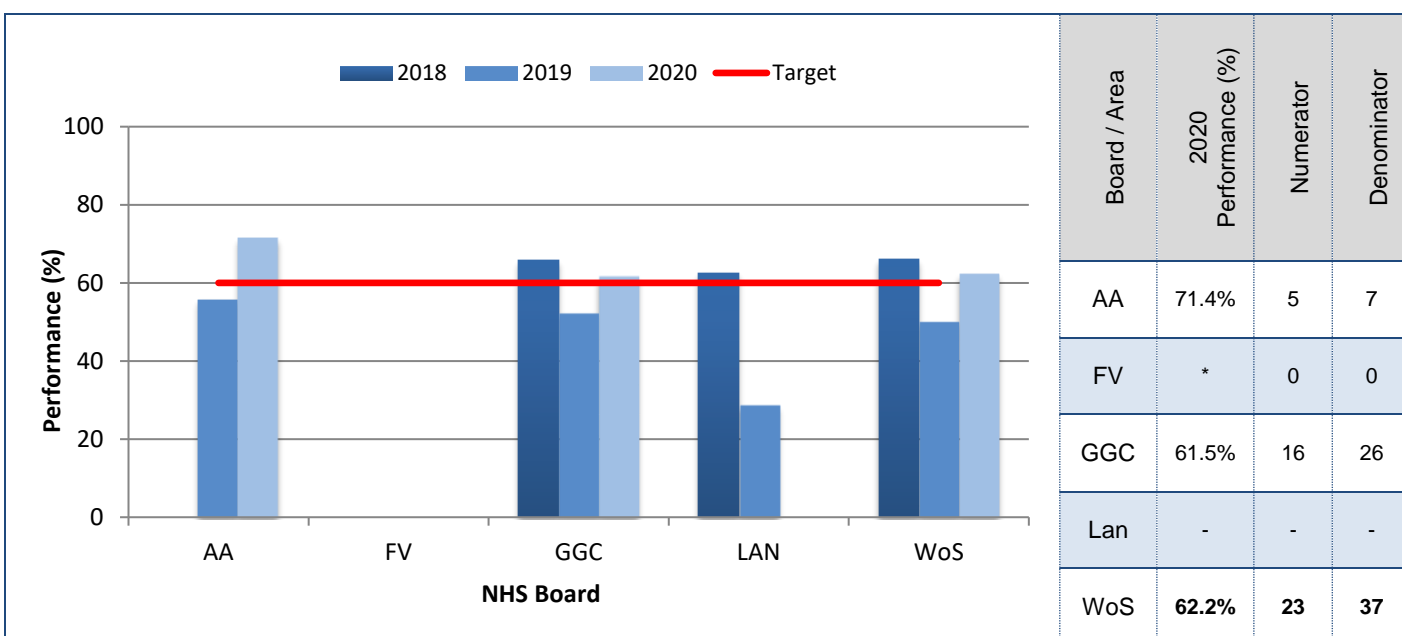
Once again, in respect of both oesophageal and gastric cancers, the number of patients included within the denominator is low and can have a considerable effect on overall proportions, therefore comparisons of performance should be made with caution.

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 cancer¹. 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. SMR01 data provided by ISD is utilised for measurement of QPI 9.

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

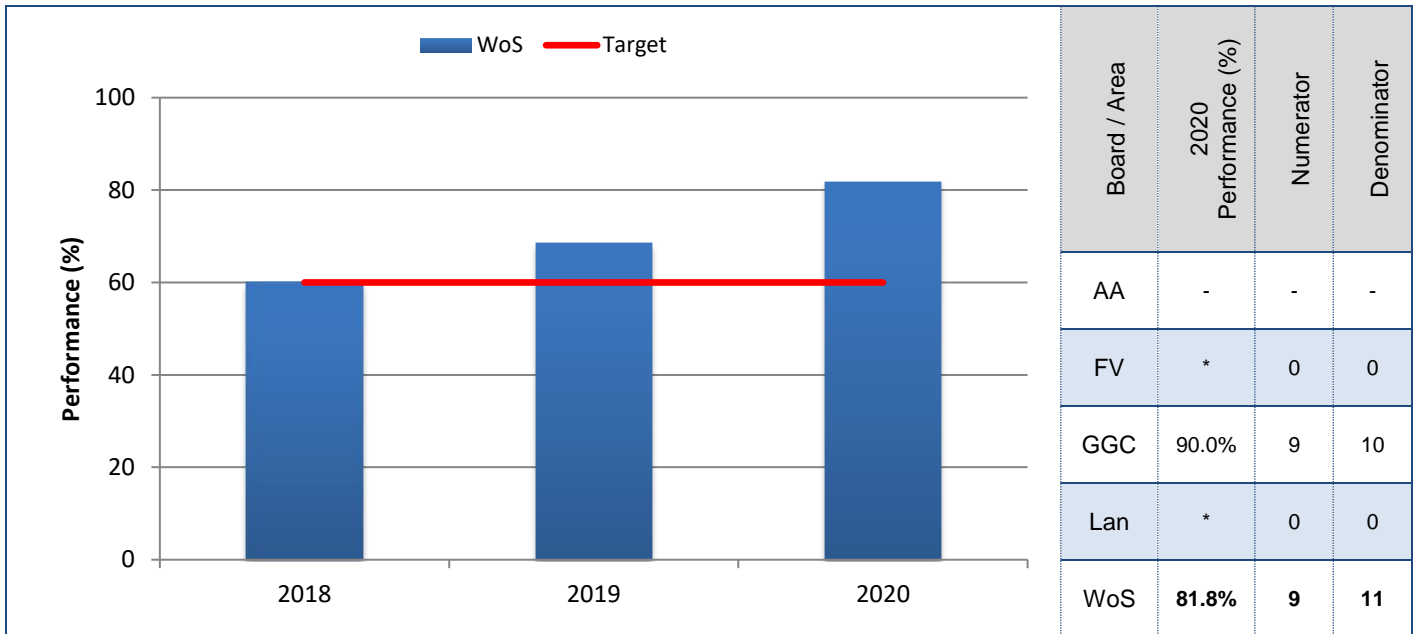
Oesophageal Cancer



Of the 37 patients undergoing surgical resection for oesophageal cancer, 23 patients were discharged within 14 days of their surgical procedure. This resulted in a WoS performance of 62.2%, above the 60% QPI target.

Review of patients not being discharged within 14 days of surgery reveal that these patients had a range of minor and more complex complications that required a longer hospital stay; fluctuations in performance between NHS Board and years is to be expected as results are based on small numbers of patients. NHSGGC have developed a pathway to enhance recovery after surgery (ERAS) over the last 3 years which will enable patients to be discharged more quickly after surgery and this tool has now been shared with other WoSCAN Boards.

Gastric Cancer



Performance across the WoS was 81.8% 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 and continued improvements to the ERAS protocols, as discussed above, will hopefully result in further improvements in performance in future years.

This QPI is currently reported using SMR01 data however, following the recent Formal Review of Upper GI QPIs, the audit dataset has been amended to enable length of hospital stay to be reported using cancer audit data. It is anticipated that this will improve the accuracy of reporting of this QPI in future years and assist in clinical review of patients not meeting the QPI target. This will also enable the median length of hospital stay to be recorded alongside the performance for this QPI in future years, providing additional context to the results of this QPI.

Action Required:

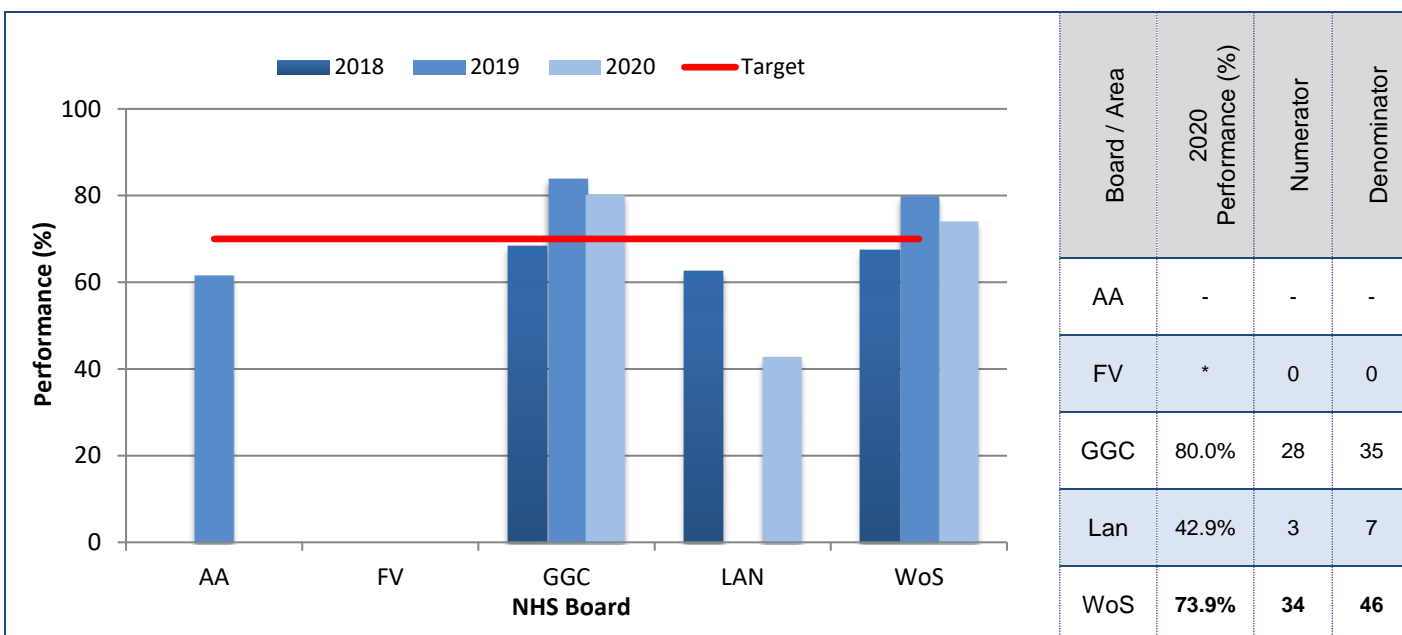
- **WoSCAN to report median length of hospital stay alongside results for QPI 9 for patients diagnosed in 2021.**

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 tumour¹.

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

Oesophageal Cancer

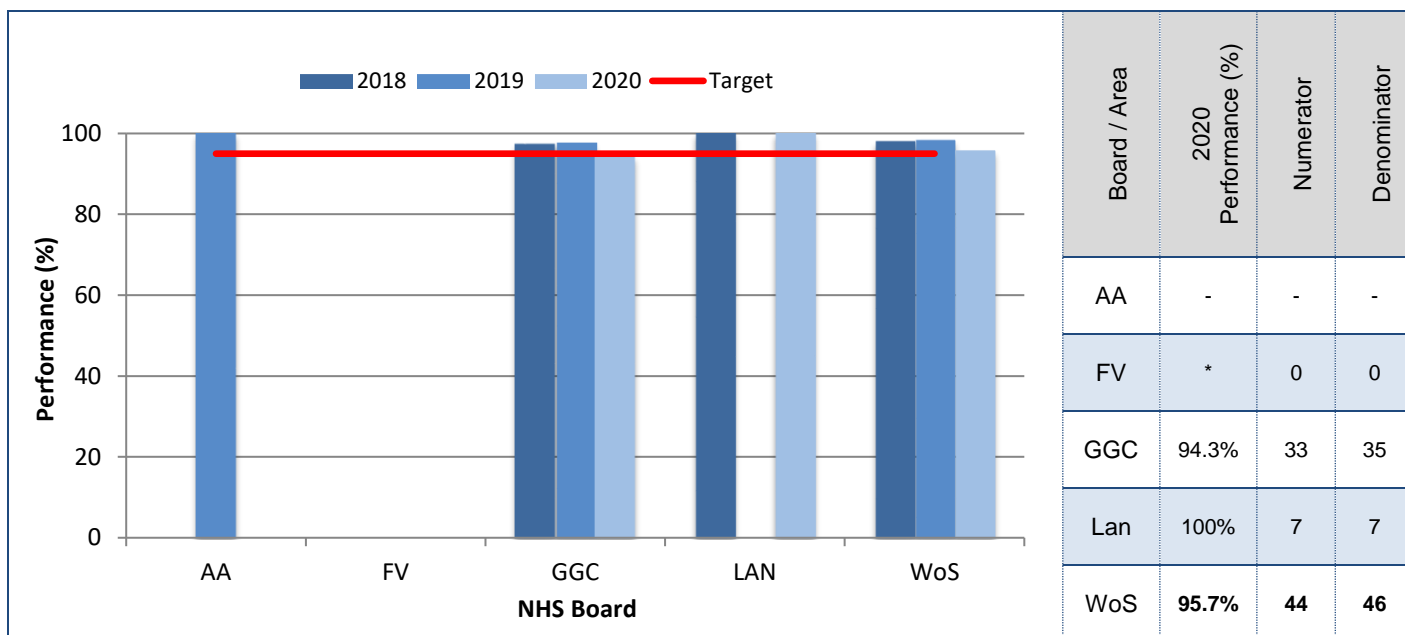


For patients diagnosed with oesophageal cancer the overall performance across the WoS was 73.9%, with 34 of the 46 patients undergoing surgical resection having circumferential margins clear of tumour; meeting the 70% target. This QPI is based on small numbers of patients so it is hard to interpret variations in performance across years and between NHS Boards.

The QPI target was not met in NHS Lanarkshire. Detailed clinical review of the patients from NHS Lanarkshire where the margin was not clear of tumour indicated that there was no tumour at the margin although tumour was present within 1mm of the margin. Two of the patients not meeting the QPI had downstaging chemotherapy prior to surgery while the other two patients did not respond to chemotherapy given, demonstrating a desire to offer surgically fit patients the opportunity for curative treatment where possible. 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.

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

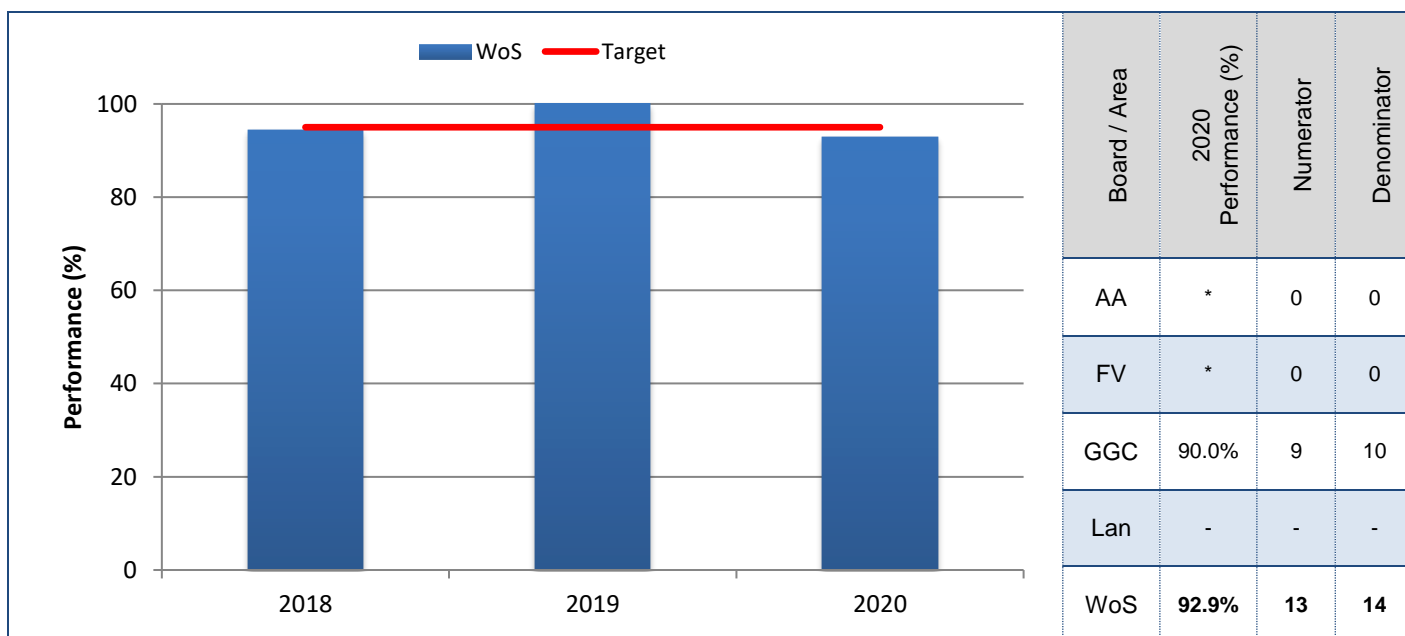
Oesophageal Cancer



Overall in the WoS of the 46 patients with oesophageal cancer undergoing surgical resection 44 had clear longitudinal margins, resulting in a performance of 95.7%, meeting the (recently increased) target of 95%.

NHSGGC narrowly missed the 95% target due to the outcomes of two patients; both these patients had advanced cancers with microscopic involvement of the surgical margins. The Board will continue to monitor performance against this QPI.

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 13 of the 14 patients diagnosed with gastric cancer had clear longitudinal margins following surgical resection, below the recently increased QPI target of 95%. The single NHSGGC patient that did not meet this QPI had extensive disease and microscopic involvement of the surgical margin.

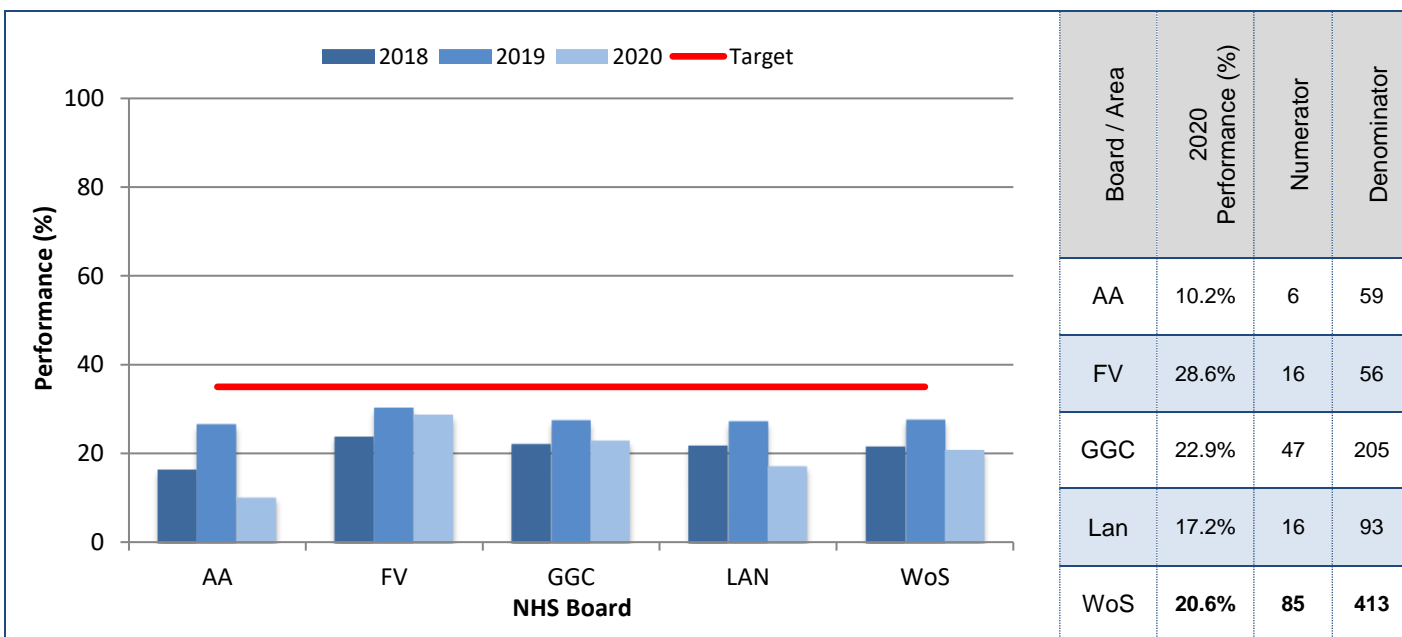
QPI 11: Curative Treatment Rates

Surgical resection of the tumour remains the mainstay of curative treatment for patients with oesophageal or gastric cancer¹. 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.

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

Oesophageal Cancer



Of the 413 patients diagnosed with oesophageal cancer in 2020, 85 underwent curative treatment, resulting in a WoS performance of 20.6%, well below the 35% target.

Review of patients not having curative treatment indicate that a high percentage of patients are not suitable for consideration for curative treatment at the time of MDT discussion 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 for all NHS Boards 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.

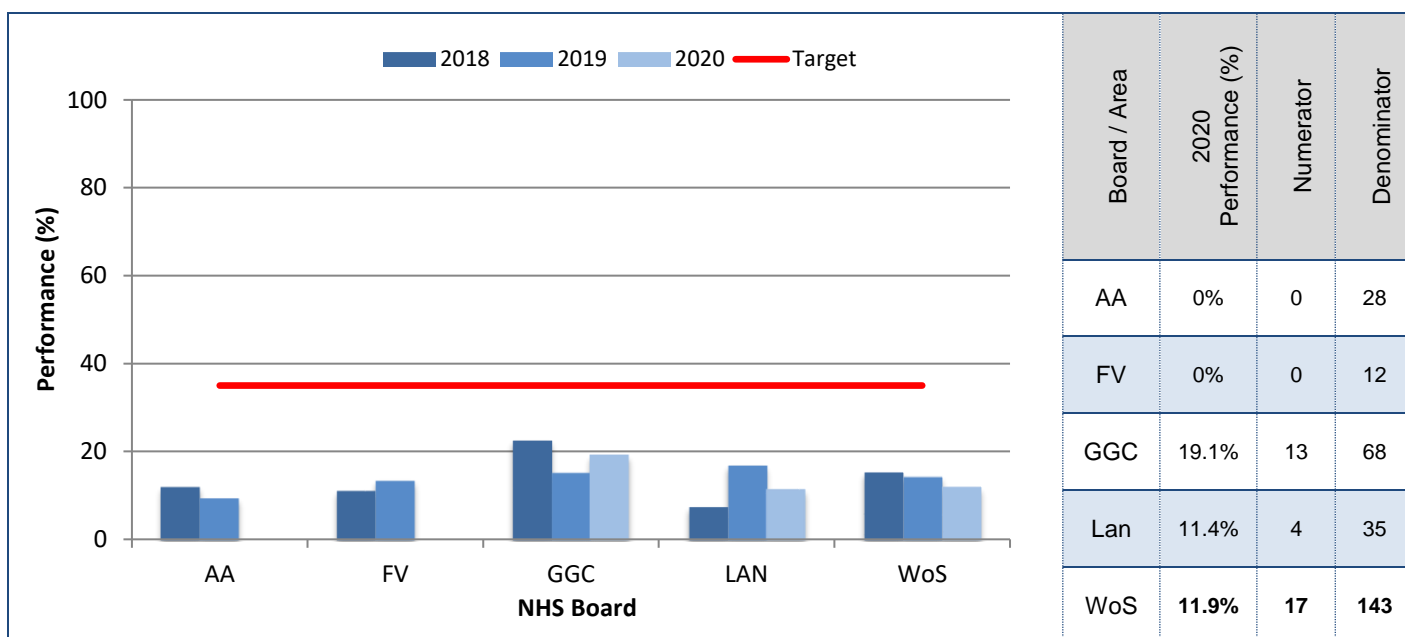
Further, NHS Ayrshire & Arran noted that delays in presentation due to the COVID-19 pandemic had resulted in patients presenting with more advanced disease in 2020, further reducing options for

progressing with curative treatment. These observations are supported by data from other sources which highlight a significant increase in the proportion of referrals coming from acute admissions and increases in the proportion of patients presenting with metastatic disease during the pandemic, which are likely to have reduced the opportunities for curative treatment in 2020.

Never-the-less WoSCAN are keen to treat disease aggressively using endoscopic and other radical treatments where appropriate. 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 2 patients with Stage I disease (40%) and 27 patients with Stage II disease (60%) 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, NHS GGC is currently rolling out the use of cytosponge to facilitate the early diagnosis of upper GI cancer and help to target endoscopies. It is hoped that this will increase early detection of disease and consequently result in the improvement of curative treatment rates.

Gastric Cancer



Overall performance across the WoS was 11.9%, with 17 of 143 gastric patients undergoing curative treatment; below the 35% QPI target.

Challenges with meeting the target for gastric cancer patients are the same as those outlined for oesophageal cancer above. Further analysis indicated that 7 patients with Stage I disease (58%) and 15 patient with Stage II disease (71%) did not have curative intent.

QPI 12: 30-day mortality following Oncological treatment

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. This QPI is intended to ensure treatment is given appropriately¹.

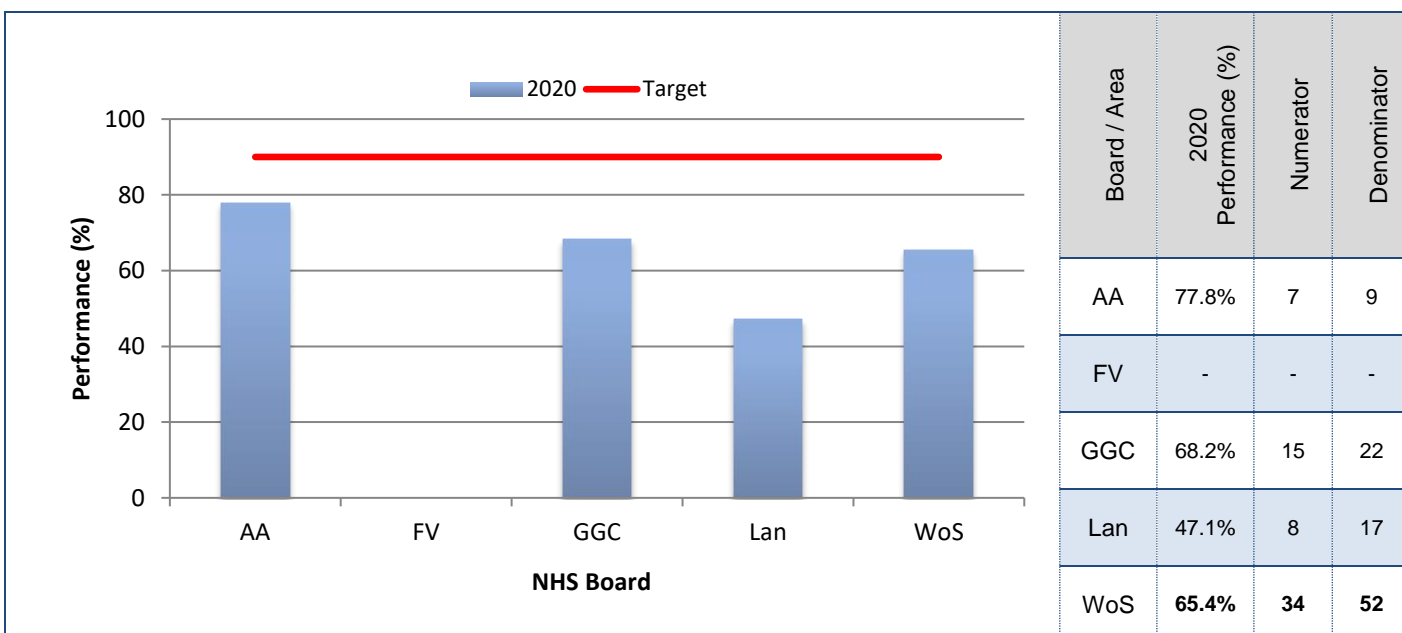
QPI 12	30 day mortality following Systemic Anti-Cancer Therapy (SACT) treatment for oesophageal or gastric cancer
Numerator:	Number of patients with oesophageal or gastric cancer who undergo SACT that die within 30 days of treatment.
Denominator:	All patients with oesophageal or gastric cancer who undergo SACT.
Exclusions:	No exclusions.
Target:	Curable < 5% Non-curable <15%

This amended QPI will use CEPAS (Chemotherapy ePrescribing and Administration System) data to measure SACT mortality to ensure that the QPI focuses on the prevalent population rather than the incident population. The measurability for this QPI is still under development to ensure consistency across the country and it is anticipated that performance against this measure will be reported in the next audit cycle. In the meantime all deaths within 30 days of SACT will continue to be reviewed as standard practice in line with local procedures at a NHS Board level.

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 patient¹.

QPI 13:	HER2 status should be available to inform treatment decision making in patients with oesophageal or gastric adenocarcinoma.
Description:	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.
Numerator:	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.
Denominator:	All patients with oesophageal or gastric adenocarcinoma undergoing first line palliative chemotherapy as their initial treatment.
Exclusions:	No exclusions
Target:	90%



Overall in the WoS of the 52 patients with oesophageal or gastric adenocarcinoma undergoing first line palliative chemotherapy as their initial treatment, 34 of these patients had HER2 status reported prior to commencing treatment, resulting in a performance of 65.4% against the 90% target. As this QPI was substantially revised at the recent Formal Review of Upper GI Cancer QPIs, there are no comparable data from previous years; this revised measure was not met in any of the regions within Scotland in 2020.

Clinical review of the patients not meeting this QPI indicated that of the 18 patients only 3 did not have the HER2 status reported, the other 15 patients had HER2 results reported shortly after the commencement of palliative chemotherapy. There remains some delays in receiving results from HER2 testing, which is currently undertaken at University College London however it is expected that testing will be established in Glasgow in 2022; this is anticipated to speed up reporting times and improve performance against this QPI. However, in reality it is unlikely that HER2 testing ordered at an MDT meeting will be reported prior to patients being seen in clinic and therefore the feasibility of undertaking HER 2 molecular testing upfront should be considered.

Action Required:

- **MCN to explore the feasibility of undertaking HER2 testing at the time of the index endoscopy with the molecular pathology team so that HER2 results are available in time to inform decisions on palliative chemotherapy treatment.**

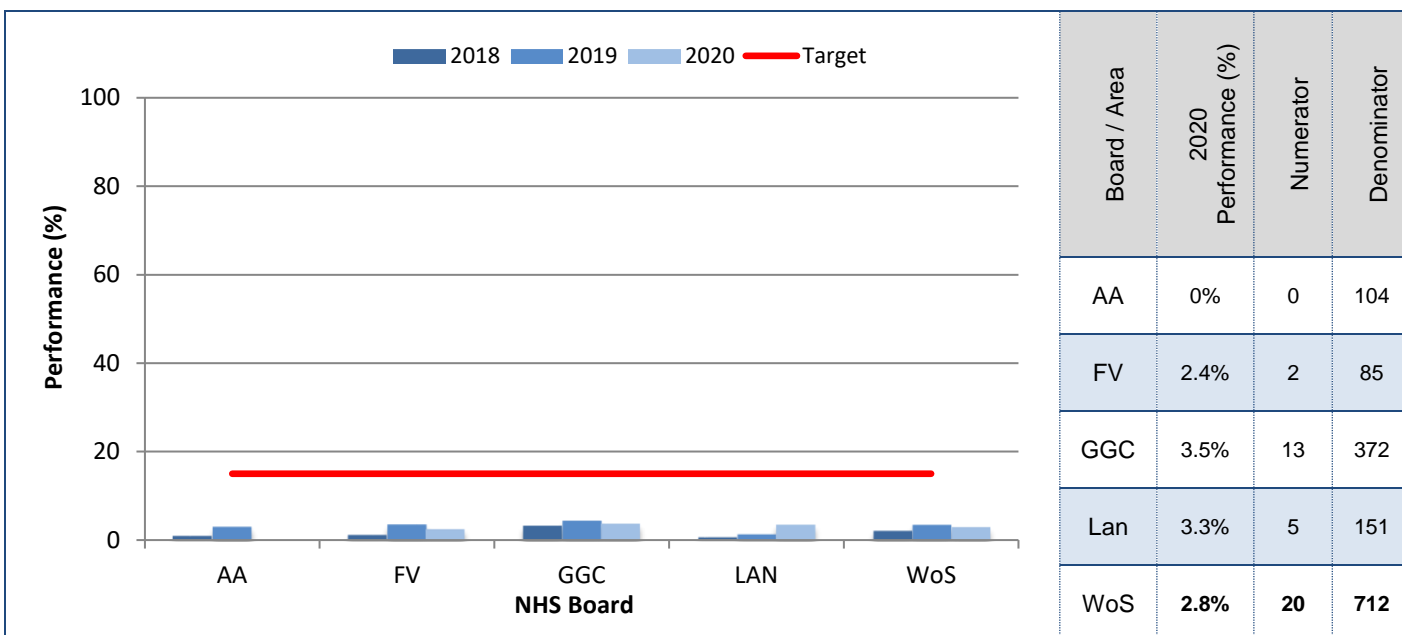
QPI 14: Clinical Trials and Research Study Access

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 data⁷.

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 mechanism⁴.

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

All Upper GI Cancer



Results provided are for numbers of patients consented for clinical trials or research studies in 2020 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 2.8% of patients with upper GI cancer are consented for clinical trials and research study access, well below the target of 15%. A list of the trials for which patients from WoSCAN were consented is provided below.

Project Title	No. patients consented
A phase 1 dose-escalation study to evaluate the safety, tolerability and pharmacokinetics of DTX-SPL8783 in patients with advanced solid tumours	2
A Phase I/IIa trial of BT1718 in patients with advanced solid tumours	2
Add-Aspirin	1
ATRIUM	1
BALLAD	1
DZB-CS-202: phase 1b/2 HER2-negative gastric adenocarcinoma study	1
ECMC EXPLOR BIOMARKER	1
IMAGINE	4
M6620 plus standard treatment in oesophageal and other cancer	1
SCOPE 2	2
Solid Tumors-0027/0134-UCB Pharma	1
Study of IMC-C103C as monotherapy and in combination with Atezolizumab	2
Tislelizumab plus chemo in first-line Oesophageal Squamous Cell Cancer	1

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.

Performance against this QPI was further affected by the COVID-19 pandemic in 2020. Individual trial sponsors advised that recruitment should be suspended due to the COVID-19 pandemic and all trial activity was stopped on the 13th March 2020. As the year progressed, Principal Investigators of the trials worked with the senior trials management group to undertake a risk assessment for each individual trial and get updated approval before being able to re-open to recruitment. Many suspended clinical trials were re-opened between June and October 2020. However some patients were reluctant to attend hospital during the lockdown period, further impacting on recruitment once trials were reopened. Additionally, no new clinical trials were considered at the Clinical Trial Executive Committee during the lockdown period in 2020.

Action Required:

- **All MDTs to keep abreast of current trial availability and ensure active MDT discussions on the suitability of trials for individual patients to maximise recruitment.**

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

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

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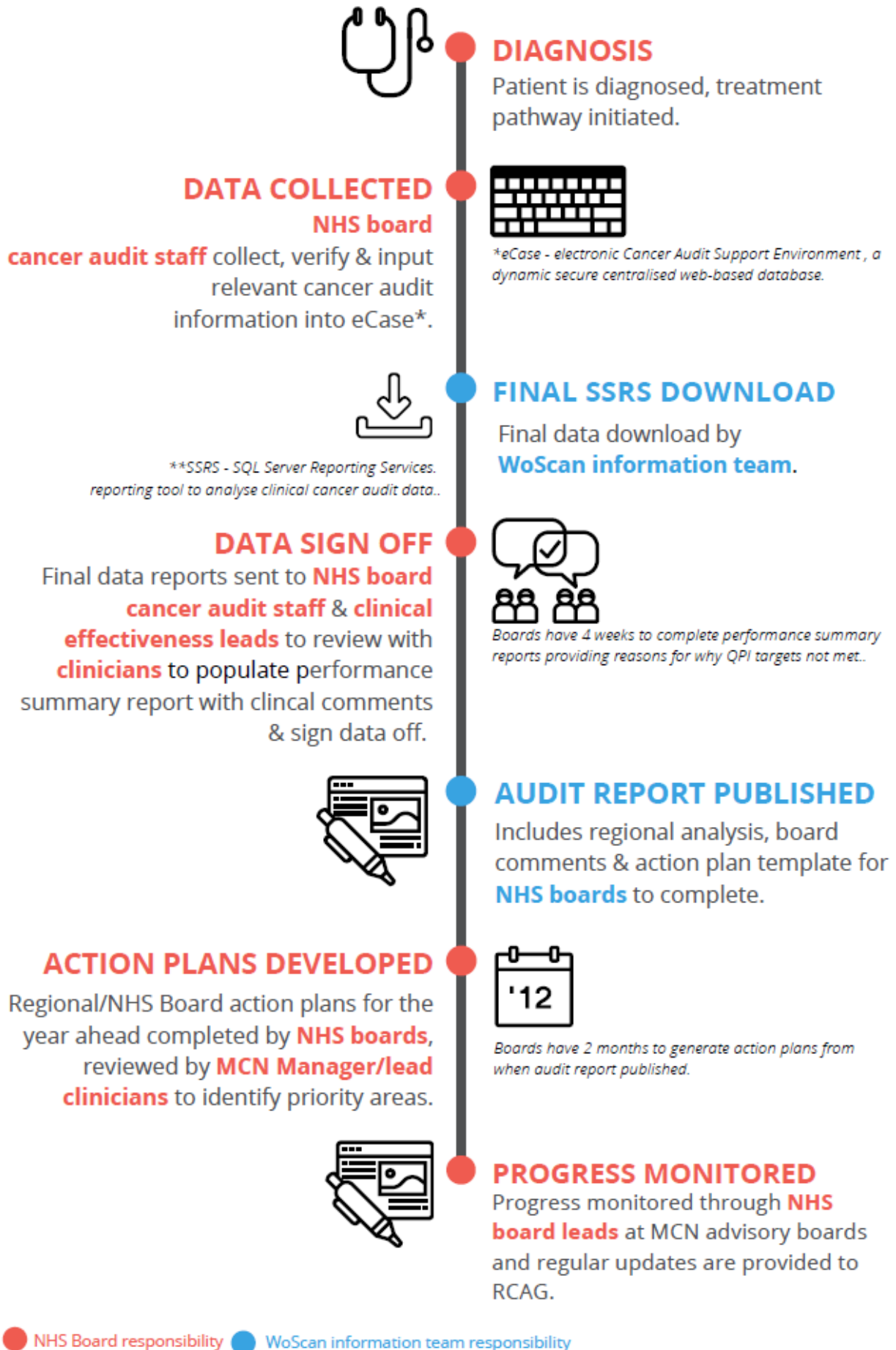
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Appendix 1: Meta Data

Report Title	Audit Report: Upper GI Cancer Quality Performance Indicators																								
Time Period	Patients diagnosed between 01 January 2020 to 31 December 2020																								
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 11 August 2021																								
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="403 1319 1334 1626"> <thead> <tr> <th>Health Board of diagnosis</th> <th>2020 Audit Data</th> <th>Cases from Cancer registry (2015-2019)</th> <th>Case Ascertainment</th> </tr> </thead> <tbody> <tr> <td>Ayrshire & Arran</td> <td>89</td> <td>104</td> <td>85.6%</td> </tr> <tr> <td>FV</td> <td>68</td> <td>85</td> <td>80.0%</td> </tr> <tr> <td>GGC</td> <td>273</td> <td>372</td> <td>73.4%</td> </tr> <tr> <td>Lanarkshire</td> <td>128</td> <td>151</td> <td>84.8%</td> </tr> <tr> <td>WoS Total</td> <td>558</td> <td>712</td> <td>78.4%</td> </tr> </tbody> </table>	Health Board of diagnosis	2020 Audit Data	Cases from Cancer registry (2015-2019)	Case Ascertainment	Ayrshire & Arran	89	104	85.6%	FV	68	85	80.0%	GGC	273	372	73.4%	Lanarkshire	128	151	84.8%	WoS Total	558	712	78.4%
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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

NHS Board:	WoSCAN MCN
Action Plan Lead:	
Date:	

KEY (Status)	
1	Action fully implemented
2	Action agreed but not yet implemented
3	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>
9	WoSCAN to report median length of hospital stay alongside results for QPI 9 for patients diagnosed in 2021 (data capture)							
13	MCN to explore the feasibility of undertaking HER2 testing at the time of the index endoscopy with the molecular pathology team so that HER2 results are available in time to inform decisions on palliative chemotherapy treatment (pathology)							

Upper Gastro-intestinal Cancer Action / Improvement Plan

NHS Board:	NHS Ayrshire & Arran
Action Plan Lead:	
Date:	

KEY (Status)	
1	Action fully implemented
2	Action agreed but not yet implemented
3	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 No. from key above</i>
5	All Boards to ensure that patients have MUST scores recorded routinely at the first point of contact with the patient (clinical documentation)						
14	All MDTs to keep abreast of current trial availability and ensure active MDT discussions on the suitability of trials for individual patients to maximise recruitment (clinical trials)						

Upper Gastro-intestinal Cancer Action / Improvement Plan

NHS Board:	NHS Forth Valley
Action Plan Lead:	
Date:	

KEY (Status)	
1	Action fully implemented
2	Action agreed but not yet implemented
3	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 No. from key above</i>
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14	All MDTs to keep abreast of current trial availability and ensure active MDT discussions on the suitability of trials for individual patients to maximise recruitment (clinical trials)						

Upper Gastro-intestinal Cancer Action / Improvement Plan

NHS Board:	NHS Greater Glasgow and Clyde
Action Plan Lead:	
Date:	

KEY (Status)	
1	Action fully implemented
2	Action agreed but not yet implemented
3	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 No. from key above</i>
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Upper Gastro-intestinal Cancer Action / Improvement Plan

NHS Board:	NHS Lanarkshire
Action Plan Lead:	
Date:	

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

No	Action Required	NHS Board Action Taken	Timescales		Lead	Progress/Action Status	Status (see key)
			Start	End			
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