

West of Scotland Cancer Network

**Urological Cancer
Managed Clinical Network**



Audit Report

Testicular Cancer Quality Performance Indicators

Clinical Audit Data: 01 October 2021 to 30 September 2022

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Testicular Cancer Data Overview

Patients diagnosed between October 2021 - September 2022

Number of cases diagnosed:

85

Number of new cases in Scotland (2020)*:

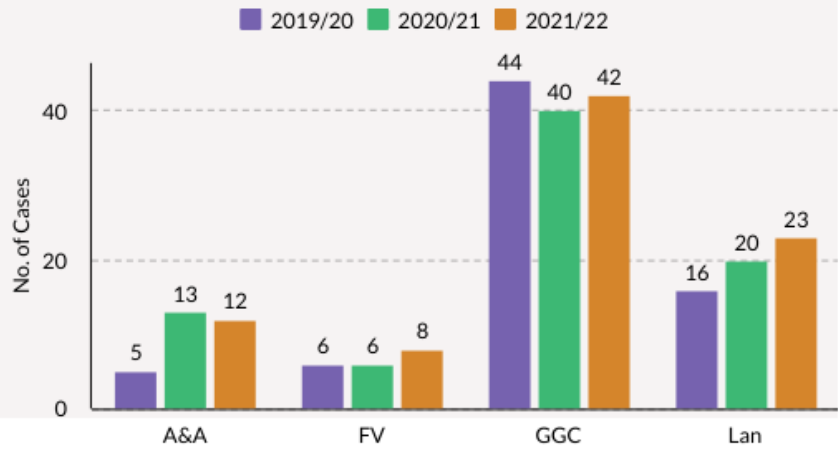
193

*Source: PHS

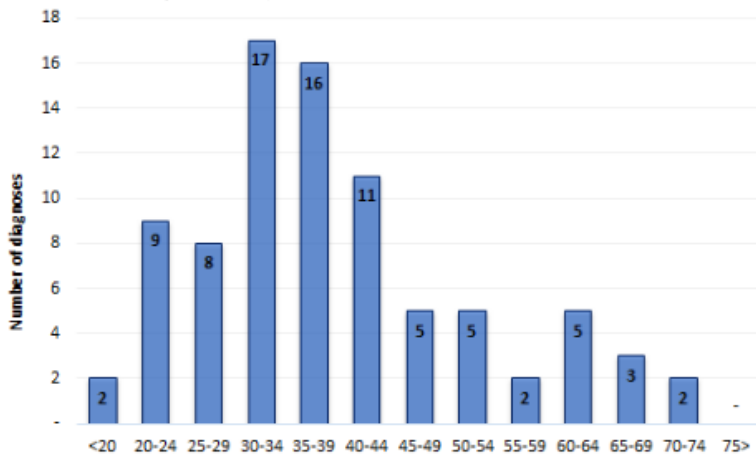
Case ascertainment:

96.6%

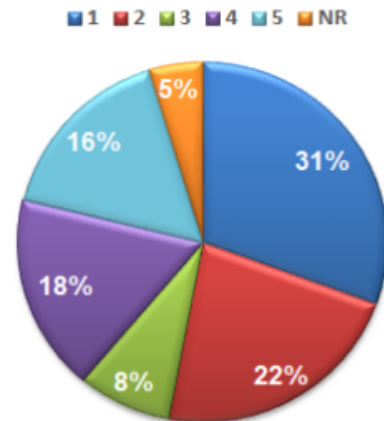
Number of patients by Board



5 year Age distribution

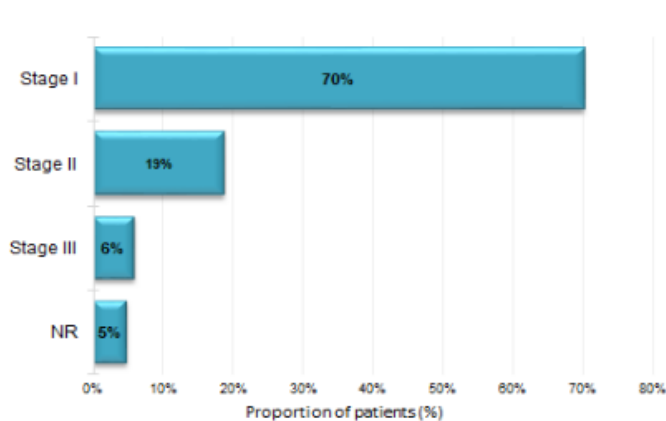


SIMD

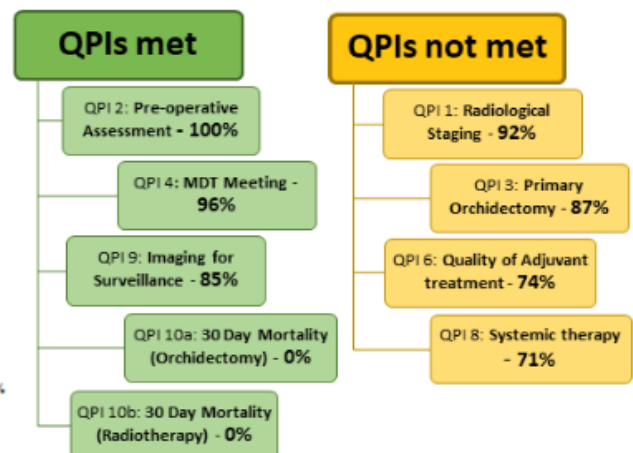


*1=most deprived, 5=least deprived

Stage



QPI Overview



Executive Summary

This report contains an assessment of the performance of West of Scotland (WoS) urological cancer services using clinical audit data relating to patients diagnosed with testicular cancer in the twelve months between 01 October 2021 and 30 September 2022

Cancer audit has underpinned much of the regional development and service improvement work of the MCN and the regular reporting of activity and performance have been fundamental in assuring the quality of care delivered across the region. Additionally the measurement of performance against QPIs has helped to drive continuous improvement and ensure equity of care for patients across Scotland.

The eighth year of Testicular Cancer QPI analysis showed that Boards had variable but generally good performance against the Testicular cancer QPIs. Over the past three years, there has been progress in the number of testicular cancer patients who have undergone Primary Orchiectomy within three weeks of diagnosis via ultrasound. It is encouraging that the targets were met regionally for Pre-operative assessment, MDT discussion, Imaging for surveillance patients, and 30-day mortality (Radiotherapy and Orchiectomy) suggesting that Boards were able to effectively provide high-quality care and treatment for testicular cancer patients.

Where QPI targets were not met, NHS Boards have provided detailed commentary. In the main these indicate valid clinical reasons or that, in some cases, patient choice may have influenced patient management. QPI 2: Pre-operative Assessment and QPI 10: 30 Day Mortality (following Orchiectomy & Radiotherapy) were met by all Boards and therefore detailed graphs have not been included for these QPIs in the main report.

There are a number of actions required as a consequence of this assessment of performance against the agreed criteria.

Action required:

QPI 3 - Primary Orchiectomy

- NHSGGC to remind the team on each site about the pathway for seeing and treating these patients by the on-call team.

QPI 6 - Quality of Adjuvant Treatment:

- NHS Lanarkshire to ensure referrals are copied to both BWoSCC consultants to ensure timely referrals going forward.

A summary of actions has been included within the Action Plan Report accompanying this report and templates have been provided to Boards.

Completed Action Plans should be returned to WoSCAN in a timely manner to allow the plans to be reviewed at the Regional Cancer Oversight Group.

Testicular Cancer QPI Performance Summary Report

| Testicular MCN | | | | | |
|----------------|----|----|-----|-----|-----------|
| Year | AA | FV | GGC | LAN | WoSCAN |
| 2021 - 22 | 12 | 8 | 42 | 23 | 85 |
| 2020 - 21 | 13 | 6 | 40 | 20 | 79 |
| 2019 - 20 | 5 | 6 | 44 | 16 | 71 |

| Colour Key | |
|------------|------------------|
| | Above QPI target |
| | Below QPI target |

A dash (-) denotes restricted data where the denominator is less than 5. An asterisk (*) denotes data where the denominator is zero.

| Quality Performance Indicator (QPI) | Performance by NHS Board of diagnosis | | | | | | |
|--|---------------------------------------|-----------|-----------------|---------------|-----------------|-----------------|-----------------|
| | QPI target | Year | AA | FV | GGC | LAN | WoSCAN |
| QPI 1: Radiological Staging - Patients with testicular cancer should be evaluated with appropriate imaging to detect the extent of disease and guide treatment decision making. | 95% | 2021 - 22 | 92% (11/12) | 88% (7/8) | 90% (35/39) | 100% (20/20) | 92% (73/79) |
| | | 2020 - 21 | 75.0% | 80.0% | 94.6% | 85.0% | 87.8% |
| | | 2019 - 20 | 80.0% | 66.7% | 84.2% | 93.3% | 84.4% |
| QPI 2: Pre-operative Assessment - Patients with testicular cancer should have pre-operative assessment of the testicle and Serum Tumour Markers (STMs). | 95% | 2021 - 22 | 100% (12/12) | 100% (8/8) | 100% (39/39) | 100% (20/20) | 100% (79/79) |
| | | 2020 - 21 | 100.0% | 60.0% | 100.0% | 100.0% | 97.3% |
| | | 2019 - 20 | 100.0% | 100.0% | 94.7% | 93.3% | 95.3% |
| **QPI 3: Primary Orchiectomy - Patients with testicular cancer should have primary orchiectomy within 3 weeks of ultrasonographic diagnosis. | 95% | 2021 - 22 | 100% (12/12) | 80% (8/10) | 81% (35/43) | 95% (19/20) | 87% (74/85) |
| | | 2020 - 21 | 66.7% | 40.0% | 76.3% | 95.0% | 77.3% |
| | | 2019 - 20 | 100.0% | 16.7% | 66.7% | 71.4% | 65.6% |

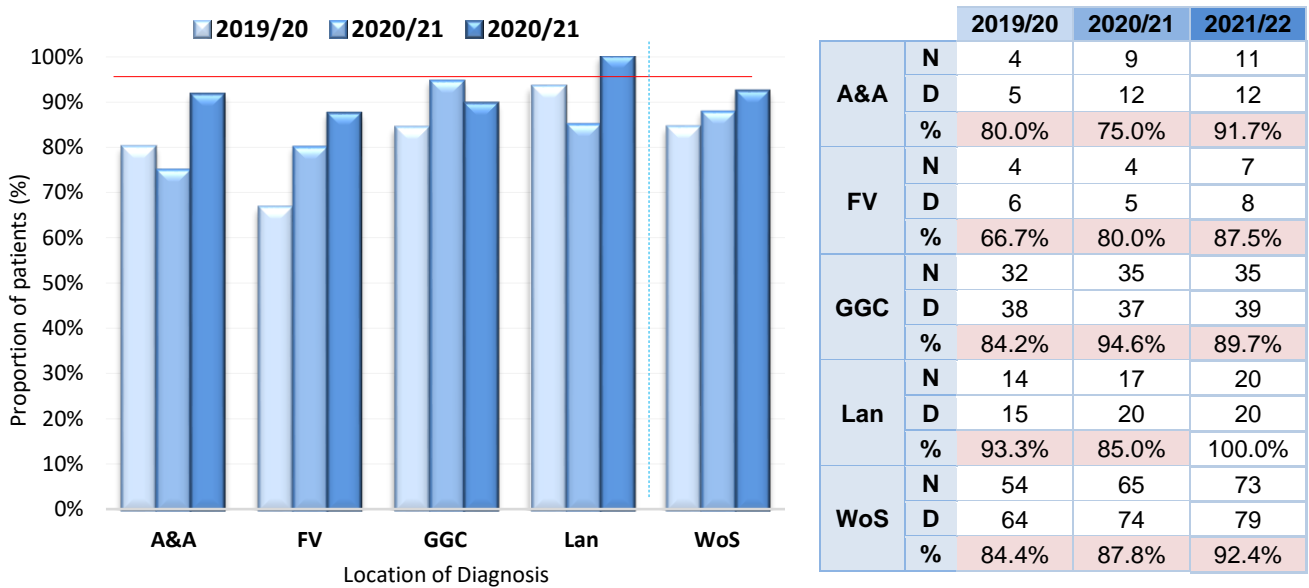
| Quality Performance Indicator (QPI) | Performance by NHS Board of diagnosis | | | | | | |
|---|---------------------------------------|-----------|----------------|---------------|----------------|----------------|----------------|
| | QPI target | Year | AA | FV | GGC | LAN | WoSCAN |
| QPI 4: Multi-Disciplinary Team Meeting - Patients with testicular cancer should be discussed by a Multi Disciplinary Team (MDT) to agree a definitive management plan post orchidectomy with staging and pathology. | 95% | 2021 - 22 | 92% (11/12) | 100% (8/8) | 98% (40/41) | 96% (21/22) | 96% (80/83) |
| | | 2020 - 21 | 92.3% | 100.0% | 100.0% | 100.0% | 98.7% |
| | | 2019 - 20 | 100.0% | 100.0% | 95.2% | 93.8% | 95.7% |
| QPI 6: Quality of Adjuvant Treatment - Patients with stage I seminoma receiving adjuvant single dose carboplatin should have an AUC of 7mg/ml/min based on ethylene diamine tetra-acetic acid (EDTA) clearance. | 95% | 2021 - 22 | - | - | 86% (12/14) | 71% (5/7) | 74% (20/27) |
| | | 2020 - 21 | 100.0% | 50.0% | 100.0% | 100.0% | 95.5% |
| | | 2019 - 20 | 100.0% | 50.0% | 87.5% | 100.0% | 84.6% |
| QPI 8: Systemic Therapy - Patients with metastatic testicular cancer who are undergoing systemic therapy should receive Systemic Anti-Cancer Therapy (SACT) within 3 weeks of a MDT decision to treat with SACT. | 95% | 2021 - 22 | - | * | 58% (7/12) | 83% (5/6) | 71% (15/21) |
| | | 2020 - 21 | 100.0% | 50.0% | 90.0% | 75.0% | 82.4% |
| | | 2019 - 20 | - | 100.0% | 33.3% | 50.0% | 40.0% |
| QPI 9: Imaging for Surveillance Patients - Patients with stage I testicular non-seminomatous (or mixed) germ cell tumour (NSGCT) under surveillance should undergo CT or MRI scanning of the abdomen (+/- imaging of the chest and pelvis), as per clinical relevance. | 85% | 2021 - 22 | - | * | 100% (5/5) | - | 85% (11/13) |
| | | 2020 - 21 | 100.0% | - | 100.0% | 100.0% | 100.0% |
| | | 2019 - 20 | - | 100.0% | 75.0% | 0.0% | 75.0% |
| **QPI 10: 30 Day Mortality (Orchidectomy) - 30 day mortality following treatment for testicular cancer. | <5% | 2021 - 22 | 0% (0/12) | 0% (0/10) | 0% (0/48) | 0% (0/22) | 0% (0/92) |
| | | 2020 - 21 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | | 2019 - 20 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| QPI 10: 30 Day Mortality (Radiotherapy) - 30 day mortality following treatment for testicular cancer. | <5% | 2021 - 22 | - | * | - | * | 0% (0/2) |
| | | 2020 - 21 | - | - | 0.0% | - | 0.0% |
| | | 2019 - 20 | - | - | - | 0.0% | 0.0% |

**QPI analysed by Location of Surgery

QPI 1: Radiological Staging

| | |
|---------------------|---|
| Description: | Proportion of patients with testicular cancer who undergo Computed Tomography (CT) scanning, ideally contrast-enhanced CT, of the chest, abdomen and pelvis within 3 weeks of orchidectomy. |
| Numerator: | Number of patients with testicular cancer undergoing CT scanning of the chest, abdomen and pelvis (CT CAP) within 3 weeks of orchidectomy. |
| Denominator: | All patients with testicular cancer. |
| Exclusions: | Patients undergoing chemotherapy prior to orchidectomy. |
| Target: | 95% |

Fig 1: The proportion of patients with testicular cancer who undergo CT scanning of the chest, abdomen and pelvis within three weeks of orchidectomy, from 2019/20 – 2021/22.



All Boards reviewed cases not meeting the target and provided detailed clinical feedback.

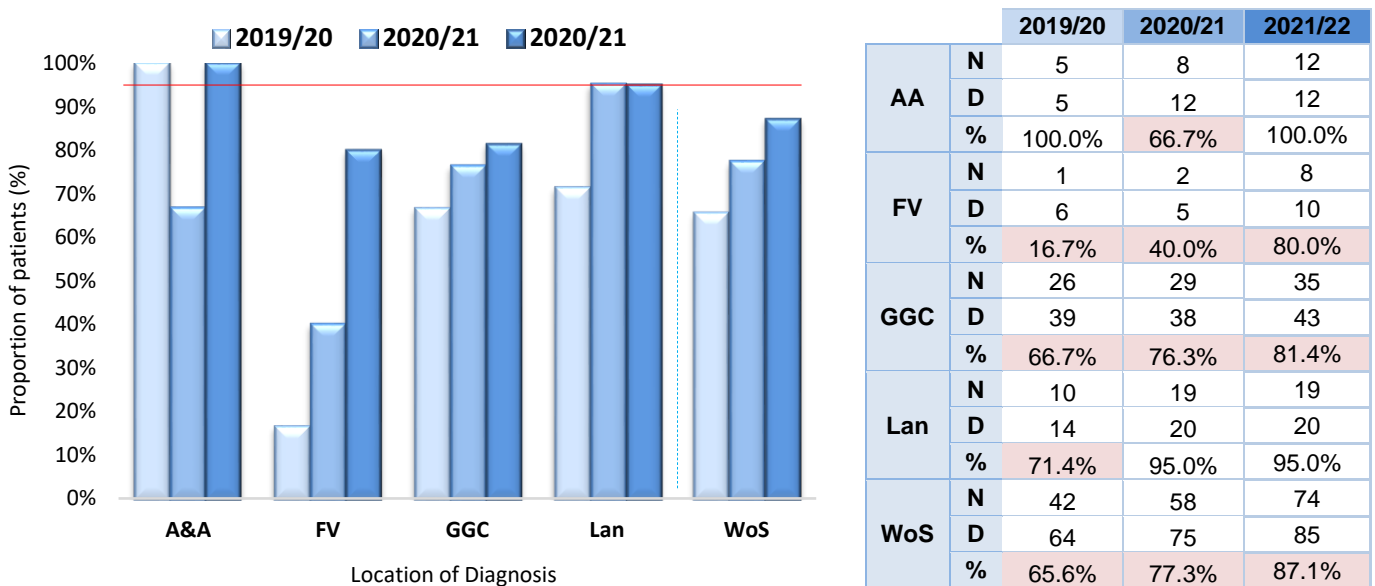
NHS Ayrshire & Arran provided specific detail and it was acknowledged that this was a particularly complex case, which was managed in consultation with the BWoSCC specialist oncologist.

NHS Forth Valley and NHS GGC reviewed the cases and stated that most cases did not meet the target as a result of patient-related factors that were beyond the hospital's control. In addition, one case experienced a slight delay in receiving their CT scan.

QPI 3: Primary Orchidectomy

| | |
|---------------------|--|
| Description: | Proportion of patients with testicular cancer who undergo primary orchidectomy within 3 weeks of ultrasonographic diagnosis. |
| Numerator: | Number of patients with testicular cancer undergoing orchidectomy within 3 weeks of ultrasonographic diagnosis. |
| Denominator: | All patients with testicular cancer undergoing orchidectomy. |
| Exclusions: | Patients undergoing chemotherapy prior to orchidectomy. |
| Target: | 95% |

Fig 3: The proportion of patients with testicular cancer who undergo primary orchidectomy within 3 weeks of ultrasonographic diagnosis from 2019/20 – 2021/22.



The 95% target for QPI 3 was not achieved. In the WoS 87.1% of patients with testicular cancer underwent primary orchidectomy within 3 weeks of ultrasonographic diagnosis. It should be noted that the number of patients included within the denominator is low and can have a considerable effect on overall proportions; therefore comparisons between NHS Boards should be viewed with caution.

Boards reviewed the cases not meeting the target.

NHS Forth Valley commented that 2 patients failed to meet the QPI. One patient experienced a delay as they required an additional medical procedure in advance of orchidectomy, while delays in the second case were attributed to patient choice.

NHSGGC commented that seven patients exceeded the target by a median of 15 days, all were added to the In-Patient Waiting List rather than having emergency surgery arranged by the on-call team. The board also noted that the majority of cases not meeting the target occurred early in the audit period, suggesting the potential for improved results in the future as a result of actions taken based on previous findings. The recent recruitment of a dedicated testicular cancer nurse specialist is expected to have positively influenced the management of patients' pathways in the later part of the audit period. Nevertheless, it is important to highlight that there has been an improvement compared to the previous year.

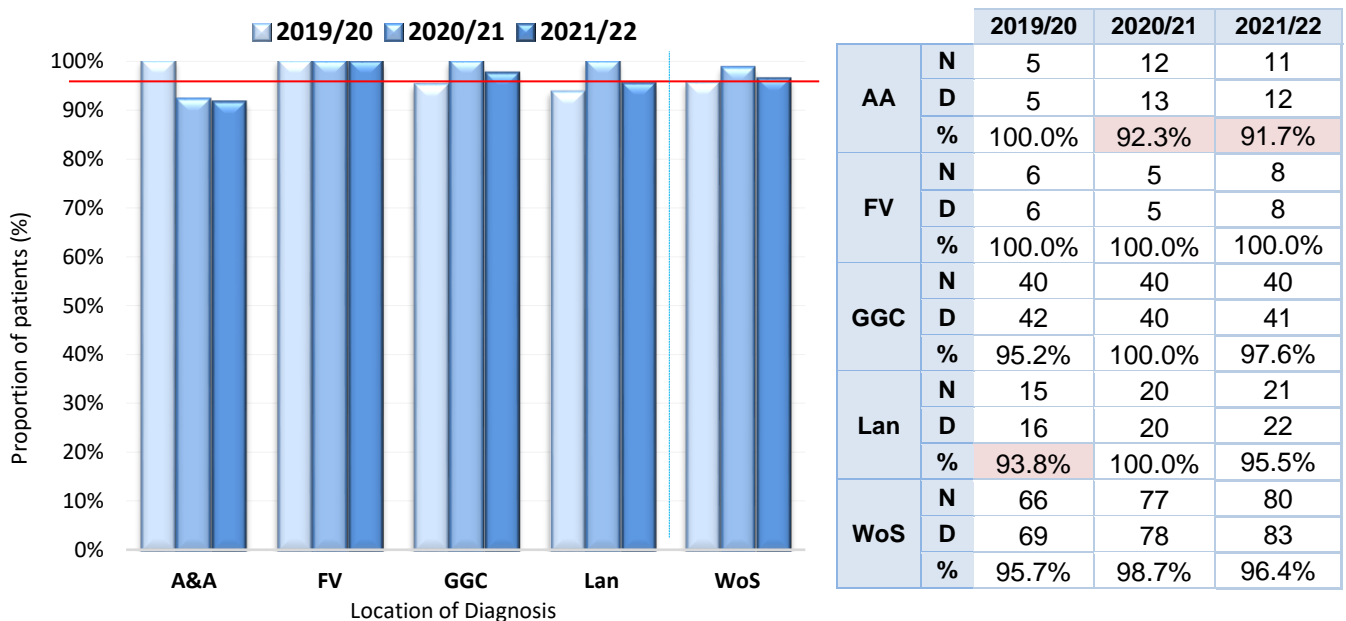
Action Required:

- NHSGGC to remind the team on each site about the pathway for seeing and treating these patients by the on-call team.

QPI 4: Multidisciplinary Team Meeting (MDT)

| | |
|---------------------|---|
| Description: | Proportion of patients with testicular cancer who are discussed at an MDT meeting to agree a definitive management plan post orchidectomy. |
| Numerator: | Number of patients with testicular cancer undergoing orchidectomy who are discussed at the MDT to agree a definitive management plan post orchidectomy. |
| Denominator: | All patients with testicular cancer undergoing orchidectomy. |
| Exclusions: | None. |
| Target: | 95% |

Fig 4: The proportion of patients with testicular cancer who were discussed at an MDT meeting to agree a definitive management plan post orchidectomy, from 2019/20 – 2021/22.



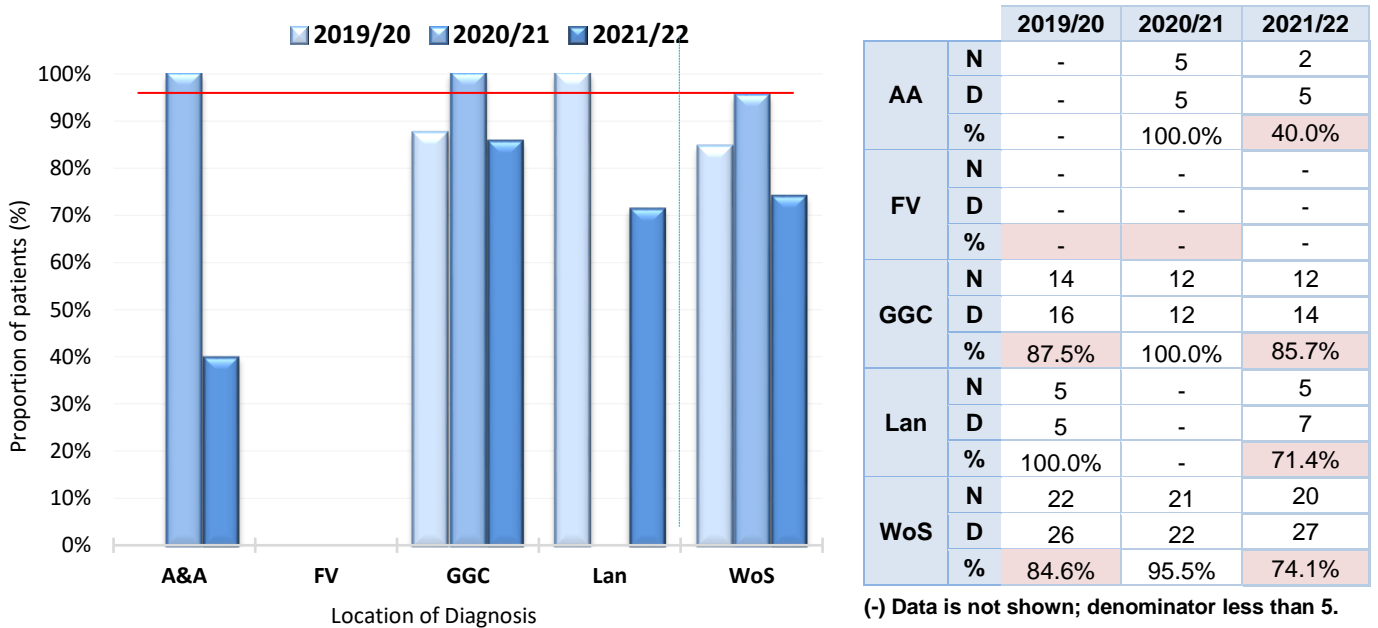
Of the 83 testicular cancer patients undergoing orchidectomy 80 were discussed at the MDT post orchidectomy and a definitive management plan agreed. This equates to 96.4% against the 95% QPI target with only NHS Ayrshire & Arran missing the target, however this represents one patient not meeting. It should be noted that the number of patients included within the denominator is low and can have a considerable effect on overall proportions; therefore comparisons between NHS Boards should be viewed with caution.

NHS Ayrshire & Arran commented that the case not meeting this QPI is the same complex case that failed QPI 1, and reiterated that the patient was managed appropriately, in consultation with the specialist oncologist at BWoSCC.

QPI 6: Adjuvant treatment of stage I seminoma with carboplatin

| | |
|---------------------|---|
| Description: | Proportion of patients with stage I seminoma receiving adjuvant single dose carboplatin AUC of 7mg/ml/min (AUC7), based on EDTA clearance within 8 weeks of orchidectomy. |
| Numerator: | Number of patients with stage I seminoma receiving adjuvant single dose carboplatin AUC7, based on EDTA clearance within 8 weeks of orchidectomy. |
| Denominator: | All patients with stage I seminoma undergoing adjuvant single dose carboplatin AUC7. |
| Exclusions: | Patients who are treated within a clinical trial. |
| Target: | 95% |

Fig 5: The proportion of patients with stage I seminoma receiving adjuvant single dose carboplatin AUC7 based on EDTA clearance, within 8 weeks of orchidectomy from 2019/20 – 2021/22.



Overall in the WoS, 74.1% was achieved against the 95% target. All Boards except NHS Forth Valley failed to meet the QPI target. It should be noted that the number of patients included within the denominator is low and can have a considerable effect on overall performance percentages; therefore comparisons between NHS Boards should be viewed with caution. Comparison across years should also be made with caution. NHS Forth Valley performance is not shown due to small numbers.

NHS Ayrshire & Arran and NHS GGC reviewed the cases that did not meet the target and commented that the delay was caused by clinical factors, patient choice, or the need for additional procedures. NHS Lanarkshire reviewed the cases not meeting the target. They commented that after reviewing the data in Urology Continuing Medical Education (CME), referrals in the future will be sent to the consultants to ensure prompt referrals.

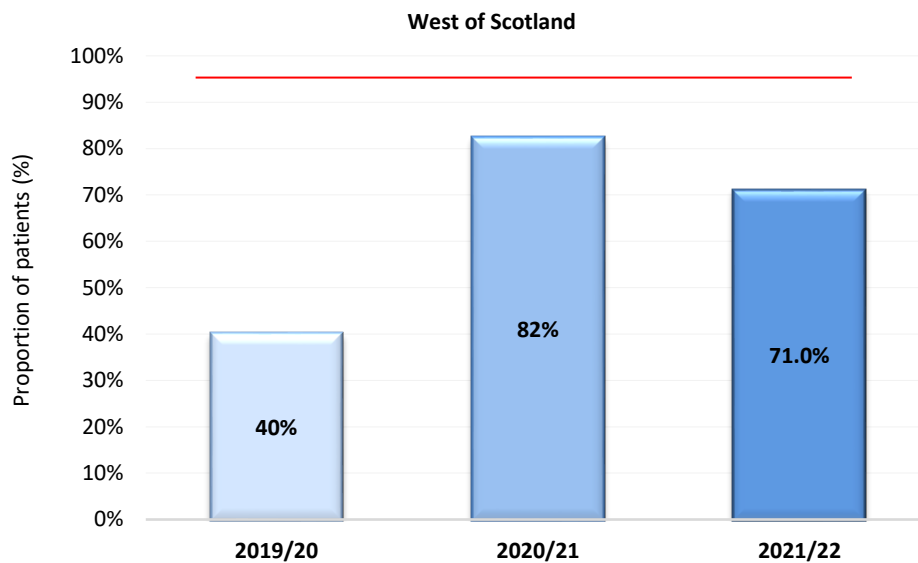
Action required:

- NHS Lanarkshire to ensure referrals are copied to both BWoSCC consultants to ensure timely referrals going forward.

QPI 8: Systemic Therapy

| | |
|---------------------|---|
| Description: | Proportion of patients with metastatic testicular cancer who undergo SACT within 3 weeks of an MDT decision to treat with SACT. |
| Numerator: | Number of patients with metastatic testicular cancer undergoing SACT within 3 weeks of an MDT decision to treat with SACT. |
| Denominator: | All patients with metastatic testicular cancer undergoing SACT. |
| Exclusions: | Patients whose primary chemotherapy management is as part of a chemotherapy clinical trial. |
| Target: | 95% |

Fig 6: The proportion of patients with metastatic testicular cancer who undergo SACT within 3 weeks of an MDT decision to treat with SACT, from 2019/20 – 2021/22.



Due to the small numbers meeting the denominator criteria for QPI 8, individual Board results cannot be presented. West of Scotland performance against this QPI was 71% (15 out of 21 cases) of patients with metastatic testicular cancer undergoing SACT within 3 weeks of an MDT decision to treat with SACT. It should be noted that the number of patients included within the denominator is low and can have a considerable effect on overall proportions; therefore comparisons between NHS Boards should be viewed with caution.

NHS Lanarkshire reviewed the case not meeting the target and detailed feedback was provided.

NHS GGC reviewed the cases and noted that a very small number of patients did not have a urology MDT discussion before up-front chemo while other patients were 4-8 days outside the target, with reasons including comorbidities, complex patient factors involving multiple specialties, and a single local audit coding error related to tumour markers, which once corrected would result in the patient being excluded from the denominator.

QPI 9: Computed Tomography Scanning for Surveillance Patients

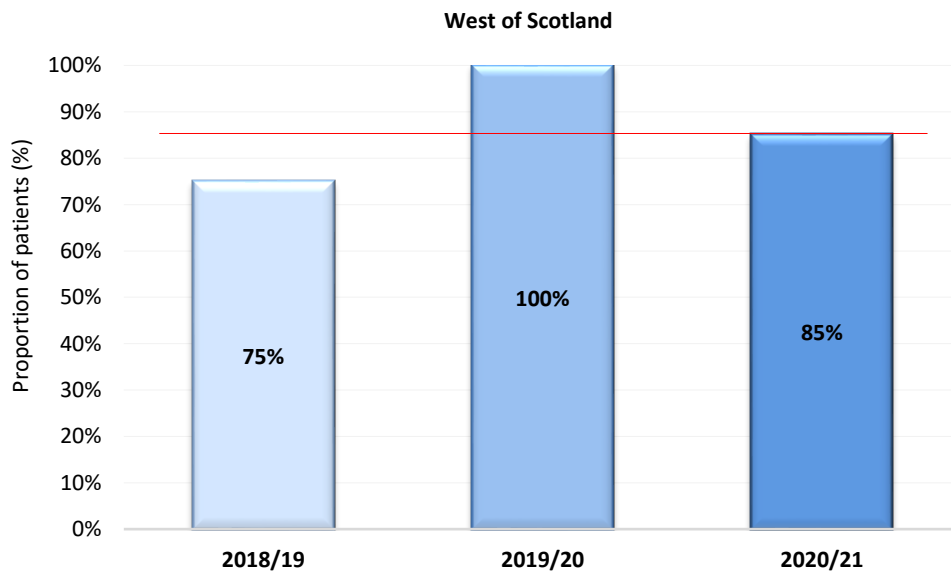
| | |
|---------------------|---|
| Description: | Proportion of patients with stage I testicular NSGCT (or mixed) under surveillance who undergo at least three CT scans of the abdomen +/- chest and pelvis within 14 months of diagnosis. |
| Numerator: | Number of patients with stage I testicular NSGCT (or mixed) under surveillance who undergo at least three CT scans of the abdomen +/- chest and pelvis within 14 months of diagnosis. |
| Denominator: | All patients with stage I testicular non-seminomatous (or mixed) germ cell tumour. |
| Exclusions: | Patients who have received adjuvant chemotherapy; Patients who are treated within a clinical trial. |
| Target: | 85% |

In order to ensure that a full 14-month period had elapsed, enabling accurate measurement, this QPI is reported one year in arrears (2020-2021).

Only a very small number of patients were included within the measurement of this QPI and therefore individual Board results cannot be presented at this time.

It should be noted that the number of patients included within the denominator is low and can have a considerable effect on overall proportions; therefore comparisons between NHS Boards should be viewed with caution.

Fig 7: The proportion of patients with stage I testicular NSGCT (or mixed) under surveillance who undergo at least three CT scans of the abdomen +/- chest and pelvis within 14 months of diagnosis.



At regional level, data shows that 85% (11 out of 13 cases) of patients with stage I testicular NSGCT (or mixed) under surveillance underwent at least three CT scans of the abdomen +/- chest and pelvis within 14 months of diagnosis. NHS GGC achieved 100% performance for this measure.

After reviewing the cases, NHS Ayrshire & Arran and NHS Lanarkshire reported that the patients were appropriately managed, but a minor delay of one month was caused by patient choice and a further case was appropriately managed for relapsed disease.

Appendix 1: Meta Data

| | | | | | | |
|----------------------|---|------------------|--------------|-------|-------------|-------|
| Report Title | Cancer Audit Report: Testicular Cancer Quality Performance Indicators | | | | | |
| Time Period | Patients diagnosed between 01 October 2021 to 30 September 2022 | | | | | |
| QPI Version | Testicular Cancer QPIs V3.0 Cancer Quality Performance Indicators (QPIs) (healthcareimprovementscotland.org) | | | | | |
| Data extraction date | 2200 hrs on 30th January 2023 | | | | | |
| Data Quality | | Ayrshire & Arran | Forth Valley | GGC | Lanarkshire | WoS |
| | Cases from audit | 12 | 8 | 42 | 23 | 85 |
| | Cases from ISD (2017-2021) | 10 | 9 | 51 | 18 | 88 |
| | Case ascertainment | 120.0% | 88.9% | 82.4% | 127.8% | 96.6% |

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