North Cancer
Presentation Plan

- Grampian Cancer Context - Statistics Overview
- Grampian Cancer Integrated Action Plan - Drivers and Key Areas for Development
- Development and Governance of NCA
- Clinical Management Guidelines Development - What do they do?
- Quality Performance Indicators - Key Risk Areas
- Systemic Anti Cancer Therapy - Supporting Delivery
- National Survival - Next Steps
- Key Areas of Future Development - What’s next for North
Context

Population base of 1.4 million

47,383km²

6 North of Scotland Boards with 3 independent cancer centres

NHS Grampian 586,000
NHS Tayside 416,000
NHS Highland 322,000
NHS Orkney 22,000
NHS Shetland 23,000
NHS Western Isles 27,000 (proportion GG&C)
Detect Cancer Early - Comparisons
# Urgent Referrals to NHS Grampian

## Referral Summary - NHS Grampian, NHS Orkney & NHS Shetland

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine</td>
<td>135,972</td>
<td>142,302</td>
<td>142,335</td>
</tr>
<tr>
<td>Urgent</td>
<td>19,141</td>
<td>20,484</td>
<td>21,229</td>
</tr>
<tr>
<td>Urgent - Suspicion of Cancer</td>
<td>6,927</td>
<td>7,792</td>
<td>7,800</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>162,040</td>
<td>170,578</td>
<td>171,364</td>
</tr>
<tr>
<td>Other referrals</td>
<td>14,999</td>
<td>18,339</td>
<td>21,199</td>
</tr>
<tr>
<td><strong>Overall total</strong></td>
<td>177,039</td>
<td>188,917</td>
<td>192,563</td>
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</tbody>
</table>

## Summary of electronic referrals received between 01/01/2015 & 31/12/2017

### Urgent - Suspicion of Cancer

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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</thead>
<tbody>
<tr>
<td>Cancer Urgent Breast</td>
<td>1,097</td>
<td>1,280</td>
<td>1,266</td>
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<tr>
<td>Cancer Urgent Colorectal</td>
<td>1,456</td>
<td>1,628</td>
<td>1,559</td>
</tr>
<tr>
<td>Cancer Urgent Haematological</td>
<td>95</td>
<td>90</td>
<td>10</td>
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<tr>
<td>Cancer Urgent Skin</td>
<td>1,004</td>
<td>1,237</td>
<td>1,104</td>
</tr>
<tr>
<td>Cancer Urgent Lung</td>
<td>549</td>
<td>625</td>
<td>677</td>
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<tr>
<td>Cancer Urgent Head &amp; Neck</td>
<td>134</td>
<td>111</td>
<td>128</td>
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<tr>
<td>Cancer Urgent Upper GI</td>
<td>369</td>
<td>274</td>
<td>270</td>
</tr>
<tr>
<td>Cancer Urgent Gynaecological</td>
<td>595</td>
<td>713</td>
<td>736</td>
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<tr>
<td>Cancer Urgent Urological</td>
<td>872</td>
<td>845</td>
<td>868</td>
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<tr>
<td>Cancer Urgent Gastroenterology</td>
<td>6,415</td>
<td>7,152</td>
<td>7,144</td>
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<tr>
<td><strong>NHSG Total</strong></td>
<td>6,818</td>
<td>7,688</td>
<td>7,669</td>
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</table>

## Additional Urgent - Suspicion of Cancer

<table>
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<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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</thead>
<tbody>
<tr>
<td>General Surgery excl Vascular, Maxillofacial</td>
<td>1</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Cancer Urgent Suspected Bone &amp; Soft Tissue Sarcoma</td>
<td>108</td>
<td>104</td>
<td>131</td>
</tr>
</tbody>
</table>
31 Day Standard

Chart 2a: Number of referrals and performance against the 31 day standard: for all cancer types\(^1\), by NHS Board and Regional Cancer Network

Period of treatment: 1 January to 31 March 2019\(^2\)
62 Day Standard
NHS Grampian Cancer Performance and Management
NHS Grampian Cancer Performance and Management

- Prevention
- Enhancing Equitable Access and Performance
- Regional Collaboration
- Living With & Beyond Cancer
- Sustainable Workforce
- Communication and Co-ordination
- Realistic Cancer Care
Direct Access for Imaging - NHS Grampian

NHS GRAMPIAN IMAGING PATHWAY FOR PRIMARY CARE DIRECT ACCESS TO CT OF CHEST/ABDOMEN/PELVIS FOR PATIENTS WITH UNIDENTIFIED SUSPECTED MALIGNANCY

DEPARTMENT OF PRIMARY CARE

1. Clinical assessment of patient (GP) leads to very strong suspicion of suspected underlying malignancy with, for example, unexplained significant weight loss of >10% body weight.

2. There is no indication of localising signs, symptoms or laboratory tests to suggest malignancy in a specific system.

3. GP must ensure the following has been completed:
   a. History
   b. Examination including depression screening
   c. Relevant biochemical and haematological testing including HPV, if not done within the last 3 months.
   d. CXR

4. No evidence of primary intrapulmonary malignancy on CXR.

5. Patient is 40 yrs of age or over.

6. If CXR report shows metastatic disease with no known primary then this CT pathway can also be used for all age groups.
North Cancer Alliance Governance Structure

North of Scotland Chief Executive’s Group

North Cancer Alliance Board (NCAB)
Chair: Grant Archibald, Chief Executive, NHS Tayside

North Cancer Clinical Leadership Group (NCCLG)
Chair: NCA Clinical Director

North Medical Directors Group
Chair: Nick Fluck

Expert Groups
- SACT Governance Group
  - Delivery Group
  - Pharmacy Leads
  - Children & Young Adults Group
  - Electronic Prescribing
- Primary Care Group
- North Radiotherapy Group (*)
  - Brachytherapy Group
- Surgery Sub Group (*)
- Diagnostics (*)
- Acute Oncology (*)

Tumour Specific Boards
- Breast Pathway Board
- Colorectal Pathway Board
- Gynaecology Pathway Board
- Haematology Pathway Board
- Head & Neck Pathway Board
- Lung Pathway Board
- Upper GI Pathway Board
- Skin Pathway Board
- Urology Pathway Board
- HPB Pathway Board
- Cancer Unknown Primary (*)

Sub Groups
- Patient/Public Interface Group (*)
- Nurse Consultants Group
- Acute Management Interface Group (*)
- SACT Pathway Board

* Group under discussion to establish

Formal National Links
- Cancer Intelligence (SHPF)
- Sarcoma National Network
- HPB National Network
- SCONET
- Children & Young People’s MSN
- Scottish Cancer Taskforce
- National Cancer Clinical Services Group
- National Cancer Quality Operational Group
- National Cancer Quality Steering Group
- Radiotherapy Sub Group
- SACT National Groups (Various)
- TCAT Groups (Various)
- DCC Programme Board
- National Robotics Review
- eCAS Executive Group
Dear Colleague,

INTRODUCTION OF MANAGED CLINICAL NETWORKS WITHIN THE NHS IN SCOTLAND

Summary
1. The MEL sets out the core principles which should govern the introduction of Managed Clinical Networks in the NHS in Scotland.

Action
2. All Health Boards and NHS Trusts, with their planning partners, are expected to take account of the core principles in working up any proposals for Managed Clinical Networks.

3. Health Boards are requested to circulate this MEL to GPs in their areas.

4. This MEL is available on The Scottish Office website: http://www.dhp.scot.nhs.uk/hs

Yours sincerely

SIR DAVID CARTER
Chief Medical Officer

KEVIN J WOODS
Director of Strategy and Performance Management

The quality unit Planning & Quality Division

CEL 30 (2012)

July 2012

Dear Colleague,

[REVIEWED GUIDANCE FOR THE SAFE DELIVERY OF SYSTEMIC ANTI-CANCER THERAPY]

Background
Systemic anti-cancer therapy (SACT) encompasses biological therapies and cytotoxic chemotherapy. Cytotoxic chemotherapy is known to be potentially carcinogenic, mutagenic and is hazardous as defined by the Control of Substances Hazardous to Health Regulations 2002 (COSHH).

Treatment involving such medicines must be prescribed, dispensed and supplied in accordance with the Medicines Act 1968.

Purpose
The attached guidance, endorsed by the Scottish Cancer Taskforce, has been updated to reflect new knowledge, national guidelines and legislation on the safe delivery of SACT and covers all care settings including the patient’s home.


Safe Administration of Intrathecal Cytotoxic Chemotherapy CEL 21 (2009) remains current.

Action
NHS Boards are:

- required to be able to demonstrate compliance in discharging their clinical governance responsibility by ensuring implementation and monitoring of this guidance.
- Advised that a framework setting out governance and escalation nodes is being developed by Healthcare Improvement Scotland to support quality assurance. This is likely to include self-assessment and peer review.
NORTH CANCER ALLIANCE - DEVELOPMENT OF CLINICAL MANAGEMENT GUIDELINES (CMGs) PROCESS

**SUBSTANTIVE CLINICAL MANAGEMENT GUIDELINE**

- **Stage 1:** Requirement for North Cancer tumour-specific CMG development / review identified – please see “NCA – What Triggers a CMG Review?” process (hyperlink to be inserted).

- **Stage 2:** Tumour-specific CMG Lead Author identified (if not Pathway Board Clinical Director) – please see Lead Author responsibilities.

- **Stage 3:** Pathway Board group extended to include additional CMG review group members.

- **Stage 4:** Lead Author develops CMG or adapts from current CMG, reflecting current / proposed clinical practice. New draft circulated around Review Group, comments collated by North Region team, Lead Author makes corrections to CMG as required.

- **Stage 5:** Final draft of CMG sent out for final consultation with Review Group.

- **Stage 6:** CMG circulated to wider clinical community, register of comments received. Clinical Director responsible for considering corrections to CMG, final draft reissued with register of comments once consultation period concludes.

**SACT PROTOCOLS**

- **Stage 2:** Identify participants to undertake review and development of specific Regional SACT Protocol.

- **Stage 3(i):** Review / Retrospective Development
  - Miss out Stage 3 where a signed-off local protocol already exists in the North.

- **Stage 3(ii):** New Protocol Development
  - Development of Regional SACT Protocols by nominated lead pharmacist & nominated lead consultant.*

- **Stage 4:** Review 1 undertaken by Regional Lead Pharmacist and thereafter by identified supporting pharmacists & consultants. Comments returned to and collated by Regional Cancer Team.

- **Stage 5:** Corrections / amendments applied as appropriate by nominated Lead Pharmacist and Lead Consultant.

- **Stage 6:** Revised draft regional SACT protocol produced – Review #2 as revised regional SACT Protocol goes out to supporting pharmacists & consultants for review and final comments. Agreed SACT protocols also provided to SACT Governance Group for regional oversight.

*Consultant – oncologist or haematologist

Where clinical consensus cannot be reached on CMG and SACT Protocol development, escalation via North Cancer Alliance (NCA) governance structure.

**Approval Stage 1:** Agreed CMG formally approved by tumour-specific Pathway Board and documented in action note of meeting.

**Approval Stage 2:** Final approval of CMG by Clinical Governance committee at the tumour-specific Pathway Board’s Clinical Director substantive board.

CMG published according to regional and board processes.
**NORTH CANCER ALLIANCE – WHAT TRIGGERS A REVIEW OF CLINICAL MANAGEMENT GUIDELINES (CMG)?**

<table>
<thead>
<tr>
<th>Trigger</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Review cycle every three years</strong></td>
<td>Pathway Boards must undertake a full review of CMGs every three years if not completed within the previous three years.</td>
</tr>
<tr>
<td><strong>Clinical Director</strong></td>
<td>With responsibility for the CMG, the Clinical Director can at any time propose a review of a CMG through the tumour-specific Pathway Board.</td>
</tr>
<tr>
<td><strong>Change in clinical practice</strong></td>
<td>Where identified, changes in clinical practice will warrant a review of the CMG to ensure it is representative of current practice. Any clinician can trigger this through a discussion with the tumour specific Clinical Director and/or raised at the Pathway Board.</td>
</tr>
<tr>
<td><strong>Regional variance</strong></td>
<td>Where a variance is identified in clinical practice it will trigger a CMG review to ensure clinical practice is concurrent with best practice. Please note this does not mean adopting practice of other boards/regions, but is a platform for scrutinising our own practice and ensuring CMG is representative for best patient outcomes.</td>
</tr>
<tr>
<td><strong>Changes to SACT components of CMG</strong></td>
<td>These changes do not always require a full review of a CMG. An appendix of approved SACT protocols is available within each CMG, and links to the full SACT protocols provided. SACT changes may only require changes to the CMG and not the SACT Protocol itself, therefore no full review is required.</td>
</tr>
<tr>
<td><strong>SMC approval of new SACT medicines or new indications</strong></td>
<td>The Scottish Medicines Consortium (SMC) will approve approximately 2-4 new SACT medicines / new indications per month. These can trigger a review of CMG and the development of related SACT protocols.</td>
</tr>
<tr>
<td><strong>Approval of new SACT medicines / new indications</strong></td>
<td>Area Drug Therapeutic Committees (ADTC) for each health board across the North of Scotland review separate submissions for approved new SACT medicines / new indications. As part of the North Cancer Lead Pharmacists Group this is a standing agenda item to provide oversight regionally to reduce variance and ensure SACT protocols are developed timeously to reflect prescribing changes.</td>
</tr>
<tr>
<td><strong>Regional Lead Pharmacist anticipates inclusion of new SACT regimens</strong></td>
<td>Where it is expected that new SACT medicines / new indications may be approved, the review process can be started, liaising with the SACT Lead Author to trigger the review of SACT elements of CMGs.</td>
</tr>
<tr>
<td><strong>Quality and Service Improvement</strong></td>
<td>As part of the Pathway Board actions in response to Quality Performance Indicator (QPI) results, survival analysis or any other work undertaken, this may require a review of a CMG.</td>
</tr>
<tr>
<td><strong>National recommendation</strong></td>
<td>At any time, the region may be required to undertake a review of CMGs.</td>
</tr>
</tbody>
</table>
For symptoms of suspected Breast Cancer, please refer to the Scottish Referral Guidelines for Suspected Cancer.
North of Scotland Clinical Management Guideline (CMG): Breast Cancer Last Updated 24/06/2019 DRAFT

Pathological Stage

- ER Positive HER2 Negative
  - Node negative
    - If appropriate: Genomic testing
    - High risk
      - Consider SACT +/− Adjuvant bisphosphonates if postmenopausal (see page 5)
    - Low risk
      - Endocrine therapy See below
  - Node positive
    - Consider SACT +/− Adjuvant bisphosphonates if postmenopausal (see page 5)
    - Post-menopausal + Pre-menopausal

Endocrine Therapy (ER + and or PR+)

- Pre-menopausal at diagnosis
  - Low / Intermediate risk*
    - Consider Tamoxifen for 5/10 years then aromatase inhibitor for 5 years (if post-menopausal after 5 years) or Tamoxifen for 10 years
  - High risk* or Contraindication to tamoxifen or Intolerant of tamoxifen
    - Consider ovarian suppression for 5-10 years + aromatase inhibitor (AI) or tamoxifen

- Post-menopausal at diagnosis
  - Aromatase inhibitor for 5 years or Consider Tamoxifen for 5/10 years
    - Contraindication to aromatase inhibitor or Intolerant of aromatase inhibitor
    - Consider Tamoxifen for 5/10 years
Adjuvant Bisphosphonates

- No adjuvant bisphosphonate
- Bisphosphonate offered as per protocol

*Irrespective of whether they have had chemotherapy, women who are postmenopausal, men at higher risk and pre-menopausal women who warrant ovarian suppression: i.e. ER low/negative, or ER4-8 with one or more of the following features – HER2 positive or Grade 3 or T3 or 4 or node positive.

Patients with low risk disease should not routinely be offered adjuvant bisphosphonates unless specific additional factors merit discussion on an individual patients basis.

Bisphosphonate treatment can be started concurrently with chemotherapy or on completion of chemotherapy.

Neo-adjuvant Therapy

- HER2 Negative
  - ER Positive
    - Consider chemotherapy or endocrine therapy +/- adjuvant bisphosphonates if post-menopausal
  - Triple Negative
    - Consider chemotherapy +/- adjuvant bisphosphonates if post-menopausal
  - HER2 Positive
    - Any ER
      - Consider chemotherapy +/- HER2 targeted therapy +/- adjuvant bisphosphonates if post-menopausal

- Surgery and radiotherapy
  - Post-menopausal
  - Pre-menopausal
    - If HER2 positive, complete targeted therapy
      - ER/PR positive
        - Endocrine therapy (see page 3)
      - ER/PR negative
        - Consider adjuvant capecitabine
Treatment of Metastatic disease

Metastatic Diagnosis

- ER Positive
  - Hormone treatment candidate?
    - Yes: Suitable for SACT
    - No: Progression

- ER Negative
  - Bone Metastases
    - Bisphosphonate or denosumab with other treatment (see page 5)
  - Metastatic Diagnosis

- Supportive care
  - Palliative RT if indicated

First Line
- Aromatase Inhibitor +/- goserelin +/- CDK 4/6 inhibitor (if HER2-ve)

Second Line
- Alternative AI +/- everolimus or tamoxifen or fulvestrant
- Progression

Third Line
- Alternative AI +/- everolimus or tamoxifen or fulvestrant +/- CDK 4/6 inhibitor

Progression

- Previous taxane + trastuzumab?
  - No or >6 month since adjuvant trastuzumab
  - Yes and <6 months since adjuvant trastuzumab

- HER2 positive
  - Progression
  - Trastuzumab emtansine

- HER2 negative
  - Previous anthracycline?
    - Yes: Consider anthracycline
    - No: Progression
    - Yes and <12 months ago
      - Taxane
      - Progression
      - Consider other options
    - No or >12 months ago
      - Consider other options
<table>
<thead>
<tr>
<th>SACT Protocol/Regimen Name</th>
<th>RSP Ref</th>
<th>Treatment intent</th>
<th>SACT Protocol/Regimen Name</th>
<th>RSP Ref</th>
<th>Treatment intent</th>
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<tbody>
<tr>
<td>Capecitabine</td>
<td>153</td>
<td>Adjuvant</td>
<td>Abemaciclib</td>
<td>126</td>
<td>Palliative</td>
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<tr>
<td>Docetaxel/carboplatin</td>
<td>130</td>
<td>Adjuvant</td>
<td>AC</td>
<td>125</td>
<td>Palliative</td>
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<tr>
<td>Docetaxel/carboplatin plus trastuzumab</td>
<td>131</td>
<td>Adjuvant</td>
<td>Capecitabine</td>
<td>97</td>
<td>Palliative</td>
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<tr>
<td>EC (3 weekly)</td>
<td>135</td>
<td>Adjuvant</td>
<td>Capecitabine/trastuzumab</td>
<td>128</td>
<td>Palliative</td>
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<tr>
<td>EC (3-weekly) then paclitaxel (weekly)</td>
<td>136</td>
<td>Adjuvant</td>
<td>Carboplatin</td>
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<tr>
<td>FEC 100</td>
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<td>Adjuvant</td>
<td>Docetaxel</td>
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<td>129</td>
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<tr>
<td>FEC100-T100</td>
<td>137</td>
<td>Adjuvant</td>
<td>EC (3 weekly)</td>
<td>135</td>
<td>Palliative</td>
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<tr>
<td>FEC100-T100 plus trastuzumab (IV or SC)</td>
<td>138</td>
<td>Adjuvant</td>
<td>Epirubicin (3-weekly)</td>
<td>134</td>
<td>Palliative</td>
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<tr>
<td>Paclitaxel (weekly)</td>
<td>143</td>
<td>Adjuvant</td>
<td>Epirubicin (weekly)</td>
<td>133</td>
<td>Palliative</td>
</tr>
<tr>
<td>Paclitaxel (weekly) plus trastuzumab</td>
<td>145</td>
<td>Adjuvant</td>
<td>Eribulin</td>
<td>79</td>
<td>Palliative</td>
</tr>
<tr>
<td>TC (docetaxel/cyclophosphamide) then trastuzumab</td>
<td>147</td>
<td>Adjuvant</td>
<td>Everolimus / Exemestane</td>
<td>80</td>
<td>Palliative</td>
</tr>
<tr>
<td>TC (docetaxel/cyclophosphamide)</td>
<td>147</td>
<td>Adjuvant</td>
<td>FEC 100</td>
<td>141</td>
<td>Palliative</td>
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<tr>
<td>Trastuzumab (IV or SC)</td>
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<td>Adjuvant</td>
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<td>FEC 75</td>
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<tr>
<td>Docetaxel/carboplatin plus trastuzumab</td>
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<td>Neo-adjuvant</td>
<td>Gemcitabine/carboplatin</td>
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<tr>
<td>EC (3 weekly)</td>
<td>135</td>
<td>Neo-adjuvant</td>
<td>Paclitaxel (3-weekly)</td>
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<td>Palliative</td>
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<tr>
<td>EC (3 weekly) then paclitaxel (weekly)</td>
<td>136</td>
<td>Neo-adjuvant</td>
<td>Paclitaxel (weekly)</td>
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<td>Palliative</td>
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<tr>
<td>FEC100-T100</td>
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<td>Neo-adjuvant</td>
<td>Paclitaxel albumin (Abraxane)</td>
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<tr>
<td>FEC100-T100 plus trastuzumab (IV or SC)</td>
<td>138</td>
<td>Neo-adjuvant</td>
<td>Palbociclib</td>
<td>81</td>
<td>Palliative</td>
</tr>
<tr>
<td>Paclitaxel (weekly)</td>
<td>143</td>
<td>Neo-adjuvant</td>
<td>Pertuzumab (with trastuzumab/docetaxel)</td>
<td>146</td>
<td>Palliative</td>
</tr>
<tr>
<td>Pertuzumab (with trastuzumab and Docetaxel/carboplatin)</td>
<td>154</td>
<td>Neo-adjuvant</td>
<td>Ribociclib</td>
<td>151</td>
<td>Palliative</td>
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<tr>
<td>Pertuzumab (with trastuzumab and FEC-T)</td>
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<td>Neo-adjuvant</td>
<td>Trastuzumab (IV or SC)</td>
<td>95</td>
<td>Palliative</td>
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<tr>
<td>TC (docetaxel)/cyclophosphamide</td>
<td>147</td>
<td>Neo-adjuvant</td>
<td>Trastuzumab emtansine (Kadcyla)</td>
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<td>Palliative</td>
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<tr>
<td>Trastuzumab (IV or SC)</td>
<td>95</td>
<td>Neo-adjuvant</td>
<td>Vinorelbine (IV)</td>
<td>152</td>
<td>Palliative</td>
</tr>
</tbody>
</table>

RSP = Regional SACT Protocols.
Embedded links will be provided once these protocols have been developed and published.
# TNM Staging for Breast Cancer (ICD-O-3 C50) Union for International Cancer Control (8th Edition; 2017)

<table>
<thead>
<tr>
<th>Primary Tumour (T)</th>
<th>TX: Primary tumour cannot be assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T0: No evidence of primary tumour</td>
</tr>
<tr>
<td></td>
<td>Tis</td>
</tr>
<tr>
<td></td>
<td>DCIS: Ductal carcinoma in situ</td>
</tr>
<tr>
<td></td>
<td>LCIS: Lobular carcinoma in situ</td>
</tr>
<tr>
<td></td>
<td>Paget: Paget disease of the nipple not associated with invasive carcinoma and/or carcinoma in situ (DCIS and/or LCIS) in the underlying breast parenchyma. Carcinomas in the breast parenchyma associated with Paget disease are categorized based on the size and characteristics of the parenchymal disease, although the presence of Paget disease should still be noted.</td>
</tr>
<tr>
<td></td>
<td>T1: Tumour 2 cm or less in greatest dimension</td>
</tr>
<tr>
<td></td>
<td>T1mi: Microinvasion 0.1 cm or less in greatest dimension</td>
</tr>
<tr>
<td></td>
<td>T1a: More than 0.1 cm but not more than 0.5 cm in greatest dimension</td>
</tr>
<tr>
<td></td>
<td>T1b: More than 0.5 cm but not more than 1 cm in greatest dimension</td>
</tr>
<tr>
<td></td>
<td>T1c: More than 1 cm but not more than 2 cm in greatest dimension</td>
</tr>
<tr>
<td></td>
<td>T2: Tumour more than 2 cm but not more than 5 cm in greatest dimension</td>
</tr>
<tr>
<td></td>
<td>T3: Tumour more than 5 cm in greatest dimension</td>
</tr>
<tr>
<td></td>
<td>T4: Tumour of any size with direct extension to chest wall and/or to skin (ulceration or skin nodules)</td>
</tr>
<tr>
<td></td>
<td>T4a: Extension to chest wall (does not include pectoralis muscle invasion only)</td>
</tr>
<tr>
<td></td>
<td>T4b: Ulceration, ipsilateral satellite skin nodules, or skin oedema (including peau d'orange)</td>
</tr>
<tr>
<td></td>
<td>T4c: Both 4a and 4b</td>
</tr>
<tr>
<td></td>
<td>T4d: Inflammatory carcinoma</td>
</tr>
</tbody>
</table>

### Notes
- a The AJCC exclude Tis (LCIS).
- b Microinvasion is the extension of cancer cells beyond the basement membrane into the adjacent tissues with no focus more than 0.1 cm in greatest dimension. When there are multiple foci of microinvasion, the size of the largest focus is used to classify the microinvasion. (Do not use the sum of all individual foci.) The presence of multiple foci of microinvasion should be noted, as it is with multiple larger invasive carcinomas.
- c Invasion of the dermis alone does not qualify as T4. Chest wall includes ribs, intercostal muscles, and serratus anterior muscle but not pectoral muscle.
- d Inflammatory carcinoma of the breast is characterized by diffuse, brawny induration of the skin with an erysipeloid edge, usually with no underlying mass. If the skin biopsy is negative and there is no localized measurable primary cancer, the T category is pTX when pathologically staging a clinical inflammatory carcinoma (T4c). Dimpling of the skin, nipple retraction, or other skin changes, except those in T4b and T4d, may occur in T1, T2, or T3 without affecting the classification.
<table>
<thead>
<tr>
<th>Regional Lymph Nodes (N)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NX</td>
<td>Regional lymph nodes cannot be assessed (e.g., previously removed)</td>
</tr>
<tr>
<td>N0</td>
<td>No regional lymph node metastasis</td>
</tr>
<tr>
<td>N1</td>
<td>Metastasis in movable ipsilateral level I, II axillary lymph node(s)</td>
</tr>
<tr>
<td>N2</td>
<td>Metastasis in ipsilateral level I, II axillary lymph node(s) that are clinically fixed or matted; or in clinically detected* ipsilateral internal mammary lymph node(s) in the absence of clinically evident axillary lymph node metastasis.</td>
</tr>
<tr>
<td>N2a</td>
<td>Metastasis in axillary lymph node(s) fixed to one another (matted) or to other structures.</td>
</tr>
<tr>
<td>N2b</td>
<td>Metastasis only in clinically detected* internal mammary lymph node(s) and in the absence of clinically detected axillary lymph node metastasis.</td>
</tr>
<tr>
<td>N3</td>
<td>Metastasis in ipsilateral infracavicular (level III axillary) lymph node(s) with or without level I, II axillary lymph node involvement; or in clinically detected* ipsilateral internal mammary lymph node(s) with clinically evident level I, II axillary lymph node metastasis; or metastasis in ipsilateral supraclavicular lymph node(s) with or without axillary or internal mammary lymph node involvement.</td>
</tr>
<tr>
<td>N3a</td>
<td>Metastasis in infracavicular lymph node(s).</td>
</tr>
<tr>
<td>N3b</td>
<td>Metastasis in internal mammary and axillary lymph nodes.</td>
</tr>
<tr>
<td>N3c</td>
<td>Metastasis in supraventricular lymph node(s).</td>
</tr>
</tbody>
</table>

*Clinically detected is defined as detected by clinical examination or by imaging studies (excluding lymphoscintigraphy) and having characteristics highly suspicious for malignancy or a presumed pathological micrometastasis based on fine needle aspiration biopsy with cytological examination. Confirmation of clinically detected metastatic disease by fine needle aspiration without excision biopsy is designated with a (f) suffix, e.g., cN3af. Excisional biopsy of a lymph node or biopsy of a sentinel node, in the absence of assignment of a pT, is classified as a clinical N, e.g., cN1. Pathological classification (pN) is used for excision or sentinel lymph node biopsy only in conjunction with a pathological T assignment.

**Distant Metastasis (M)**

<p>| M0 | No distant metastasis |
| M1 | Distant metastasis |</p>
<table>
<thead>
<tr>
<th>Definitions</th>
<th>Full Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>USS</td>
<td>Ultrasound Scan</td>
</tr>
<tr>
<td>MRI</td>
<td>Magnetic Resonance Imaging</td>
</tr>
<tr>
<td>MDT</td>
<td>Multi-disciplinary Team</td>
</tr>
<tr>
<td>TNM</td>
<td>Tumour, Node, Metastasis Staging</td>
</tr>
<tr>
<td>SNB</td>
<td>Sentinel Node Biopsy</td>
</tr>
<tr>
<td>ER</td>
<td>Oestrogen Receptor</td>
</tr>
<tr>
<td>PR</td>
<td>Progesterone Receptor</td>
</tr>
<tr>
<td>HER2</td>
<td>Human Epidermal Growth Factor Receptor 2</td>
</tr>
<tr>
<td>CT</td>
<td>Computerised Tomography</td>
</tr>
<tr>
<td>SACT</td>
<td>Systemic Anti-Cancer Therapy</td>
</tr>
<tr>
<td>RT</td>
<td>Radiotherapy</td>
</tr>
</tbody>
</table>
Quality Performance Indicators

There are clear roles and accountabilities in relation to governance for individuals as well as overall terms of reference for each workstream associated with cancer.

There are clearly defined, well understood processes for escalating and resolving performance issues across all groups in the structure.

The region actively engage all key clinical stakeholders on quality improvement.

Robust quality information is provided, analysed and challenged.

The appropriate governance structures at board and regional level are assured that the desired level of quality is being delivered in the development and delivery of cancer services where possible.

The clinical and regional governance streams of work are drawn together in an integrated approach.

Management of risks is subject to rigorous challenge.
QPI Key Risk Areas - Examples

- Skin
- Urology
- Ovarian
- HPB
- Lung
National Survival

- Future Plan
- Current Published Data
Our Future Story - The Next 12 Months

• Strategic Intent
• Cancer Assurance Framework
• Variance and Risk
• Using data in a more intelligent manner regionally
• Transformational change to surgery
• North Chemocare
• MDTs / Pathway Boards
• Clinical Management Guidelines - 27 CMGs
• SACT - Strategy, Protocols, Education, and New Medicines Process
• GP Education - North Primary Care Group
• Earlier diagnosis - DCE
• North Radiotherapy
• Many Other Developments