Referral and Management Guidelines for Colorectal Cancers within North Trent

Produced by the North Trent Colorectal Cancer Network Site Specific Group

June 2012
Acknowledgements

The following guidelines have been drawn up by the North Trent Colorectal Cancer Network Site Specific Group for the North Trent Cancer Network. The guidelines are based on the following source documents:

'Guidelines for the Management of Colorectal Cancer - The Royal College of Surgeons and the Association of Coloproctology of Great Britain and Ireland' June 1996

'Guidelines for the Management of Colorectal Cancer (2001) - Association of Coloproctology of Great Britain and Ireland'

'Guidance for Commissioning Cancer Services - Improving Outcomes in Colorectal Cancer’ update May 2004

'Referral Guidelines for Suspected Cancer’ – NICE, June 2005


The diagnosis and management of colorectal cancer, NICE, November 2011

The application of the guidelines will be monitored across North Trent and the guidelines themselves will be reviewed and adapted in June 2013 or earlier in light of revised national guidance.

Contributors to these guidelines include:

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Appendix 1 Network Agreed Referral Proforma
1 Primary Care Referral Guidelines

1.1 General recommendations for referral from primary care

Patients presenting with symptoms suggestive of colorectal or anal cancer should be referred to a colorectal diagnostic service using the network agreed referral proforma (see NTCN website).

In patients with equivocal symptoms who are not unduly anxious, it is reasonable to use a period of ‘treat, watch and wait’ as a method of management.

In patients with unexplained symptoms related to the lower gastrointestinal tract, a digital rectal examination should always be carried out, provided this is acceptable to the patient.

Patients who have a negative FOBt within the bowel cancer screening programme should still be referred if they have symptoms.

1.2 Recommendations for urgent referral from primary care

Age ≥ 40 years with:

- PR bleeding with change in bowel habit towards loose stool/increased stool frequency persisting for 6 weeks or more.

Age ≥ 60 years with:

- Change in bowel habit to loose stool/increased stool frequency persisting for 6 weeks or more without PR bleeding.
- Persistent rectal bleeding

All ages:

- Right lower abdominal mass consistent with large bowel involvement.
- Palpable rectal mass (intraluminal and not pelvic – pelvic masses outside the bowel require urological/gynaecological referral).

Anaemia:

- Men of any age with unexplained iron deficiency anaemia and Hb ≤ 11g/100ml.
- Non-menstruating women with unexplained iron deficiency anaemia and Hb ≤ 10g/100ml.
1.3 Risk factors

NICE referral guidelines state:

Ulcerative Colitis:

- ‘In patients with ulcerative colitis or a history of ulcerative colitis, a plan for follow-up should be agreed with a specialist and offered to the patient as a normal procedure in an effort to detect colorectal cancer in this high risk group.’

Family History:

- ‘There is insufficient evidence to suggest that a positive family history of colorectal cancer can be used as a criterion to assist in the decision about referral of a symptomatic patient.’

1.4 Investigations prior to referral

In patients with equivocal symptoms, a full blood count may help in identifying the possibility of a gastrointestinal malignancy by demonstrating iron deficiency anaemia. This should then determine if a referral should be made and its urgency.

If the decision to refer has been made, a full blood count may assist specialist assessment in the outpatient clinic. This should be in accordance with local arrangements.

In patients in whom the decision to refer has been made, no examination/investigation additional to abdominal and rectal examination, and a full blood count are recommended as this may delay referral.

1.5 Diagnostic Services

The diagnosis and assessment of patients referred from primary care with potential colorectal cancer is only carried out by the named diagnostic services outlined below. There is a single initial decision point (final common path) for prioritising appointments for patients referred for investigation of large bowel symptoms. There is no direct referral of newly presenting patients for large bowel investigations from primary care to individual, named colorectal surgeons or gastroenterologists.

Endoscopy is the preferred initial investigation for making the definitive diagnosis of colorectal cancer in all the diagnostic services.
### Referral and Management Guidelines for Colorectal Cancers within North Trent - 2010

#### Name of MDT | Type of MDT | Host Site / Diagnostic Service | Hospital Contact Point | Referring PCT | Catchment Population
--- | --- | --- | --- | --- | ---
Barnsley colorectal MDT | Local | Barnsley Hospital | 2WW Choose and book direct booking into clinic slots or contact 2WW coordinator Diane Sykes 01226 432000 | Barnsley Primary Care Trust | 231,551
Chesterfield Colorectal MDT | Local | Chesterfield Royal Hospital | New appointments office via 2ww coordinator Tel 01246 516126 | Derbyshire County Primary Care Trust (excludes High Peak & Dales) | 363,056
Doncaster & Bassetlaw Colorectal MDT | Local | Doncaster & Royal Infirmary & Bassetlaw NHS Foundation Trust | Doncaster Jodie Stot Tel: 01302 647018 Bassetlaw April Brumpton Tel: 01909 502359 | Doncaster Primary Care Trust | 293,143
Rotherham Colorectal MDT | Local | The Rotherham NHS Foundation Trust | 2ww office Via choose and book Robia Ullah | Rotherham Primary Care Trust | 243,889
Sheffield Colorectal MDT | Local | Northern General Hospital. Sheffield Teaching Hospital Foundation Trust | 2ww referrals to: 0114 2266464(fax) Or sht-tr.2WeekWaitLower GI@nhs.net Referral from local to specialist MDT Mandy Newton 0114 2714601 | Sheffield Primary Care Trust | 534,251
Anal Cancer MDT | Specialist | Northern General Hospital. STH | Referral from local to specialist MDT Mandy Newton 0114 2714601 | All above | 1,772,483
Early Rectal Cancer MDT | Specialist | Northern General Hospital. STH | Referral from local to specialist MDT Mandy Newton 0114 2714601 | All above | 1,772,483
Liver Resection MDT | Specialist stand alone | Northern General Hospital. STH | Referral from local to specialist MDT Carmen Tweed 0114 2714887 | All above | 1,772,483

**Total** | | | | | **1,772,483**

1.6 **Policy for Onward Referrals From the Colorectal Diagnostic Service and Incidental Diagnosis of Colorectal Cancer**

Endoscopy is the preferred means of establishing a diagnosis of colorectal cancer.

When an endoscopist identifies an abnormality at sigmoidoscopy or colonoscopy as a cancer with a high degree of confidence outside of the identified local
cancer pathway, the endoscopist should take responsibility for ensuring the rapid entry of the patient into the local management pathway. This will require the identification of biopsy specimens as urgent for rapid processing within the pathology department, informing the referring clinician of the suspected diagnosis on the day of the investigation and informing the MDT co-ordinator of the patients details.

When colorectal cancer is agreed with a high degree of confidence on an imaging investigation initiated by a non-MDT clinician or clinical service (including a GP) the report will be transmitted to the referring clinical team on the day of the diagnosis through the locally established communication mechanism for transmitting urgent reports.

When a diagnosis of colorectal cancer is established in a biopsy which was not regarded as malignant by the endoscopist, the pathologist should inform the responsible clinician on the day of the diagnosis through the locally established communication mechanism for transmitting urgent reports.

A member of the clinical team informed that a patient under their care has or is highly likely to have a colorectal cancer will be responsible for the urgent referral of the patient to a named core member of the colorectal MDT. The local service leads will ensure clinicians likely to encounter patients in their practice with colorectal cancer are informed of the responsibility. Such clinical groups include upper GI surgeons, gynaecologists, gastro-enterologists and physicians with an interest in medicine for the elderly and radiologists.

The following flowchart illustrates the referral pathway to be followed by non-designated clinicians whose patients have a diagnosis of colorectal cancer.

**Key points to note**

- It is the responsibility of the non-designated clinician to inform the patient of their diagnosis of colorectal cancer or that they are suspected of having colorectal cancer and their referral to the Colorectal MDT via email or telephone.

- The referral to a core member of the Colorectal MDT should be made within one working day of the colorectal diagnosis.
Table One: Onward referral to core member of colorectal MDT

<table>
<thead>
<tr>
<th>Hospital of non-designated clinician</th>
<th>Core member / designated clinician</th>
<th>MDT Co-ordinator contact details</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Rotherham NHS Foundation Trust</td>
<td>Mr R Slater (MDT Lead Clinician)</td>
<td>Mrs R Ullah, MDT co-ordinator</td>
</tr>
<tr>
<td></td>
<td>Mr M. Bassuini</td>
<td><a href="mailto:Robia.ullah@rothgen.nhs.uk">Robia.ullah@rothgen.nhs.uk</a></td>
</tr>
<tr>
<td></td>
<td>Miss M Mottahedeh</td>
<td>01709 307687</td>
</tr>
<tr>
<td></td>
<td>Mr J Garner</td>
<td></td>
</tr>
<tr>
<td>Barnsley Hospital NHS Foundation Trust</td>
<td>Mr T Offori (MDT Lead Clinician)</td>
<td>Mrs Karen Ross, MDT co-ordinator</td>
</tr>
<tr>
<td></td>
<td>Mr J Bannister</td>
<td><a href="mailto:karenross@nhs.net">karenross@nhs.net</a></td>
</tr>
<tr>
<td></td>
<td>Miss A Payne</td>
<td>01226 432700</td>
</tr>
<tr>
<td>The Chesterfield Royal Hospital NHS Foundation Trust</td>
<td>Mr T Amarnath (MDT Lead Clinician)</td>
<td>Mrs S Cocking (MDT Cancer Pathway Facilitator)</td>
</tr>
<tr>
<td></td>
<td>Mr M Simms</td>
<td><a href="mailto:Sharon.cocking@chesterfieldroyal.nhs.uk">Sharon.cocking@chesterfieldroyal.nhs.uk</a></td>
</tr>
<tr>
<td></td>
<td>Mr P Goodfellow</td>
<td>01246 512796</td>
</tr>
<tr>
<td></td>
<td>Mr R Gupta</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr T White</td>
<td></td>
</tr>
<tr>
<td>Sheffield Teaching Hospitals NHS Foundation Trust</td>
<td>Mr S Amin</td>
<td>Mrs Mandy Newton (MDT Facilitator)</td>
</tr>
<tr>
<td></td>
<td>Mr I Adam</td>
<td><a href="mailto:Mandy.newton@sth.nhs.uk">Mandy.newton@sth.nhs.uk</a></td>
</tr>
<tr>
<td></td>
<td>Mr S Brown</td>
<td>0114 2714601</td>
</tr>
<tr>
<td></td>
<td>Ms L Hunt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prof R Nelson</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr Keith Chapple</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr P Skinner</td>
<td></td>
</tr>
<tr>
<td>Doncaster and Bassetlaw Hospitals NHS Foundation Trust</td>
<td>Miss J Robinson</td>
<td>Jo Mann (Cancer Services Co-ordinator)</td>
</tr>
<tr>
<td></td>
<td>Mr A O Coker</td>
<td><a href="mailto:Joanne.mann@dbh.nhs.uk">Joanne.mann@dbh.nhs.uk</a></td>
</tr>
<tr>
<td></td>
<td>Mr G Jacob</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr N Khetan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr J Bagley</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr A Harikrishnan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr J Muen</td>
<td></td>
</tr>
</tbody>
</table>

The endoscopist, radiologist and pathologist making the initial diagnosis of colorectal cancer will notify the local MDT co-ordinator. This will provide a back-up mechanism for ensuring that patients enter the next phase of the pathway rapidly, facilitating expedient histological confirmation, staging and treatment.

The diagnosis of colorectal cancer can only be established by histology, or in the absence of a tissue diagnosis, by evaluating all available evidence at the local MDT. Who will confirm the diagnosis with the patient, if not already identified, will be determined at the MDT. The GP will be informed of the diagnosis as per local MDT procedure within one working day.

When metastatic or recurrent colorectal cancer is diagnosed through an imaging investigation with a high degree of confidence the radiologist should ensure that the MDT co-ordinator is notified in a similar fashion and time frame to that of a new cancer.
Following discovery of recurrence or metastases by clinicians outside the colorectal MDT there should be referral to a core member who can present the patient at the next MDT and notify the MDT co-ordinator. Responsibility for discussing the referral with the patient would lie with the referring clinician.

1.7 Referrals within and outside of network

All colorectal MDTs should refer patients with anal cancer suitable for curative treatment to the specialist anal MDT at Sheffield Teaching Hospitals.

All colorectal MDTs should refer patients with liver metastases, selected according to the guidelines in section 7, to the specialist liver resection MDT at Sheffield Teaching Hospitals.

Pseudomyxoma patients for surgery should be referred to Salford (Sarah O’Dwyer) or Basingstoke (Brendan Moran).

Patients suitable for brachytherapy are referred to Dr Sun Myint Clatterbridge.

Endocrine tumours are referred to the endocrine MDT.

All early rectal cancers should be referred to Sheffield in accordance with the guidelines in section 4.

Patients with suspected resectable lung metastases should be referred to the lung MDT.

Anal / perianal cancers to be referred to the skin MDT is currently under discussion.

Retroperitoneal/Intra-abdominal/Visceral Tumours.

Whist the majority of tumours of the small and large bowel and rectum will be colorectal adenocarcinomas, a small minority will be of mesenchymal origin (sarcoma, GISTS, Desmoids). These diseases may affect the bowel, mesentery, retroperitoneum or pelvis. Any cases in which sarcoma/GIST or desmoids is included in the differential should be referred to the sarcoma MDT for pre-operative discussion.

In confirmed GISTS where pre-operative or palliative Imatinib therapy is planned, this will be given by Professor Woll of the sarcoma team at Weston Park Hospital.

If surgery is planned, in most cases this will be performed jointly by the colorectal team with support from a member of the sarcoma team if complex or if straightforward by the colorectal team alone.

Cases of mesenteric fibromatosis may be referred to St Marks in London as they are the national experts in the care of this rare disease. The sarcoma MDT will review the case beforehand and advise if this is appropriate.


2 Pre-operative diagnosis and staging

2.1 Examination and Investigation

Examination

Examination must focus upon evidence of primary disease and secondary spread.

All patients should have abdominal and rectal examination.

A palpable rectal mass occurs in 40-80% of patients with rectal cancer\textsuperscript{1,2}. Rectal examination is then essential in any patient presenting with lower GI symptoms above the age of 40 years, and in younger patients with persisting symptoms. It may also detect small cancers at the anorectal junction that may be missed by endoscopy.

Investigations

The majority of cancers in patients presenting with PR bleeding or altered bowel habit without other significant diagnostic factors occur within 60 cms of the anal verge, within reach of the flexible sigmoidoscope. Patients presenting with an iron deficiency anaemia, an abdominal mass or abdominal pain indicating incipient intestinal obstruction require full colonic imaging via barium enema or colonoscopy.

After detection of a colorectal cancer with a sigmoidoscope, complete visualisation of the colon is necessary to exclude synchronous lesions such that surgery may be planned appropriately. The incidence of such lesions is of order 4-5%\textsuperscript{3,4}. If complete colonic imaging is not achieved preoperatively, e.g. for stenosing lesions or in emergency presentations, it must be achieved within six months of potentially curative resections.

(After ‘Guidelines for the management of colorectal cancer (2001)’, Association of Coloproctology of Great Britain and Ireland.)

2.2 Pre-operative diagnosis

With the exception of emergency presentations, the diagnosis of colorectal cancer should ideally be confirmed by histology in all cases prior to surgery.

In certain cases however, a confident diagnosis may be based on radiological imaging, but these cases should be reviewed and agreed by the MDT meeting. Caution is advised when considering a radiological based diagnosis of a right-sided colonic cancer when the CEA level is normal and/or the patient is not anaemic.

In cases where a diagnosis of cancer is established, it should be noted whether the rest of the colon has been fully assessed, and if not, a further luminal investigation (colonoscopy, barium enema or CT colonography) arranged as appropriate.

2.3 CEA Level

A baseline CEA level should be obtained prior to surgery.

2.4 Pre-operative staging

CT of the chest abdomen and pelvis with intravenous contrast medium should be performed as the primary imaging investigation for the detection of distant spread of disease.

Abdominal ultrasound alone is not regarded as sufficient (Royal College of Radiologists 2006: Recommendations for Cross-Sectional Imaging in Cancer Management).

All patients with rectal cancer require local staging by MRI.

EUS is required to identify T1 tumours suitable for local resection. This is performed by STH on behalf of the network with the exception of Rotherham who provide this service for their local population.

It could also be used to differentiate between T2 and early T3 tumours patients suitable for pre-operative short course radiotherapy.

2.5 Clinical Responsibility

These guidelines, in conjunction with the timed pathways, clearly specify the investigation pathways for the different clinical presentations of bowel cancer. The NSSG consider that the responsibility for each part of the pathway lies with the referring clinician who is a core member of the MDT.

The policy below outlines the medical practitioner considered to be responsible for the patient throughout the colorectal pathway.
<table>
<thead>
<tr>
<th>Stage of Clinical Care</th>
<th>Responsible Clinician(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to First appointment with Secondary care</td>
<td>General Practitioner</td>
</tr>
<tr>
<td>Diagnostic Stage</td>
<td>OP appointment attended.</td>
</tr>
<tr>
<td>Initial Treatment Phase (MDT)</td>
<td>Colorectal Diagnostic Service</td>
</tr>
<tr>
<td>Primary Surgery</td>
<td>Surgeon</td>
</tr>
<tr>
<td>Primary non-surgical oncological intervention</td>
<td>Radiation and or Chemotherapy, during this phase the consultant oncologist accepting the patient referred at the MDT until this phase concluded and the patient passed back to the Surgeon.</td>
</tr>
<tr>
<td>Post surgery</td>
<td>Clinical/Medical Oncologist</td>
</tr>
<tr>
<td>Treatment for metastatic</td>
<td>For this phase the clinical applying the modality e.g Thoracic surgeon, Oncologist .</td>
</tr>
<tr>
<td>Follow up</td>
<td>Will depend on the treatments given. Normally the Consultant Surgeon.</td>
</tr>
<tr>
<td>Palliative Care</td>
<td>If Palliation needed the Palliative care consultant to whom the patient is referred.</td>
</tr>
<tr>
<td>General Principles</td>
<td>All through the patient pathway there should be ongoing access to the Clinical Nurse Specialists and MDT.</td>
</tr>
</tbody>
</table>

Decisions can be made determining the care of the patient within a single modality by the responsible clinician.

Decisions concerning modalities not covered by the currently responsible clinician should be referred back to an MDM for wider discussion.

Acquiring status of responsible clinician is an active event.

For endoscopy initial events the consultant responsible for the list must ensure that the patient is entered for the next MDT and that if they are not going to provide the next stage that the patient has been accepted by another clinician.

This policy should not inhibit referral for support from other clinician, e.g. Palliative radiotherapy.

Timely and detailed communication with the patient Primary Care colleagues is mandatory at all times.
3 Surgery

3.1 Preparation for Surgery

Key components in the preparation of patients for surgery include:

1. Resuscitation in the emergency presentation.

2. Optimisation of co-morbidities.

3. Informed consent.

All patients undergoing surgery for colorectal cancer should give informed consent unless they are unable to do so in which case it may be necessary to obtain consent from a relative. The consent should be obtained by a doctor who understands the nature of the procedure.

4. Preparation for stoma formation.

Patient should be seen by a stoma nurse prior to surgery, and the referral should be made at the earliest possible opportunity to allow time for preparation. Pre-operative home visits and stoma training should be considered when possible.

5. Cross-matching.

According to local hospital policy


There is no proven advantage for bowel preparation, however the decision is left to the surgeon. Elderly patients receiving bowel preparation should be considered for preoperative re-hydration.

7. Thrombo-embolism prophylaxis.

All patients should receive DVT prophylaxis in the form of Thrombo-embolic Deterrent stockings and low molecular weight heparin. The thrombo-embolism prophylaxis should follow each local hospital policy/guideline. Peri-operative flowtron boots.

8. Antibiotic infection prophylaxis.

There is good evidence that antibiotic prophylaxis can reduce morbidity, shorten hospital stay and reduce infection related complications. Prophylaxis should cover aerobes and anaerobes. The choice of peri-operative antibiotics should follow the local hospital policy.
3.2 Elective Surgery – Open and Laparoscopic

All patients presenting electively should be managed by the core colorectal MDT. Surgery should be performed by or supervised by a consultant surgeon who is a member of the MDT using accepted surgical techniques.

All rectal cancers are to be resected by surgeons who are trained and competent in Total Mesorectal Excision (TME).

3.3 Laparoscopic Colorectal Resections for cancer

Laparoscopic (including laparoscopically assisted) resection is recommended as an alternative to open resection for individuals with colorectal cancer in whom both laparoscopic and open surgery are considered suitable.

3.4 Network Policy Regarding Laparoscopic Surgery

Laparoscopic colorectal surgery should be performed only by surgeons who have completed appropriate training in the technique and who perform this procedure often enough to maintain competence. MDTs without core surgical members trained on the national laparoscopic colorectal cancer surgery programme or exempt, should refer patients, in line with the network criteria (outlined in section 3.4.3) to a named surgeon in a named MDT who is on the network list of surgeons for this procedure.

This policy outlines the process for gaining entry onto the list and the audit requirements to ensure maintenance of registration on the list.

3.4.1 Gaining Entry onto the List

Entry onto the list can be gained by one of three ways:

<table>
<thead>
<tr>
<th>List of Approved Laparoscopic Surgeons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criteria</td>
</tr>
<tr>
<td>(i) trained on the national laparoscopic training programme (LAPCO)</td>
</tr>
<tr>
<td>(ii) Appointment letter by CE of Trust confirming recognised laparoscopic skills for colorectal cancer</td>
</tr>
<tr>
<td>(iii) The Consultant has performed 20 or more laparoscopic surgical resections prior to 31.12.09</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter of sign off from the national programme</td>
</tr>
<tr>
<td>Skill confirmation letter authorised by CE of Trust</td>
</tr>
<tr>
<td>Data confirming 20 cases supervised by a recognised preceptor or within a training programme performed prior to 31 Dec 2009.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ratification</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSSG</td>
</tr>
<tr>
<td>NSSG</td>
</tr>
<tr>
<td>MDT Lead Clinician, NSSG Chair and Network Lead Clinician</td>
</tr>
</tbody>
</table>
(i) The primary way to gain entry onto the list of surgeons authorised to perform laparoscopic surgery is completion of training on the national laparoscopic colorectal surgery programme.

The evidence required is the letter signing off the surgeon from the national laparoscopic surgery programme. Anyone undertaking local training through a recognised preceptor will still require sign off via the national laparoscopic training programme.

Trainees on the national programme will receive an invitation letter for sign off once 20 fully documented and supervised cases have been submitted. Two DVDs must be submitted to LAPCO and reviewed prior to formal sign off by Imperial College. Trainees are allowed to operate unsupervised during this transition phase. The DVDs should be the next 2 appropriate cases (preferably one right and one left resection) and should not exceed three months from sign off. Consultants will NOT be entered onto the network approved list during the transition phase. If three months is exceeded the Chair of the NSSG and the Network Lead Clinician will write to the relevant Trust recommending that the surgeon should not continue with independent practice (except to produce DVD evidence).

The NSSG will review the sign off letter in order to approve entry onto the network list.

(ii) If a Consultant has been appointed to a trust on the basis of recognised laparoscopic colorectal cancer surgery skills they can be exempt from the sign off from the national training programme.

The evidence required is the letter of appointment from the Chief Executive of the Trust confirming that the Consultant has the recognised skills.

The NSSG will review the appointment letter in order to approve entry onto the network list.

(iii) If a Consultant has performed 20 or more laparoscopic colorectal surgical resections prior to 31st December 2009 they may be exempt from national sign off.

The evidence required includes data confirming 20 cases performed plus evidence of any courses, training programmes, conferences and preceptorship undertaken.

North Trent Cancer Network have agreed that as a minimum the following information will be required to be submitted to the MDT Lead Clinician and reviewed by the NSSG Chair and Network Lead Clinician.

- Number of cases that were supervised by a trainer that is recognised as a preceptor either via the national programme or previous local training arrangements.
- Number of operations that were laparoscopic, assisted or converted
• Site of Operation
The MDT Lead Clinician is responsible for confirming the number of laparoscopic resections. The NSSG chair and Network Lead Clinician will review the evidence in order to approve entry onto the network list.

3.4.2 Maintaining Registration on the Network Approved List

All colorectal surgeons listed as authorised to perform laparoscopic surgery will be required to participate in prospective annual audit, to include morbidity and mortality outcomes, in order to maintain registration.

Audits will be reviewed by the NSSG. Any Consultant identified as an outlier on any measure will be expected to instigate remedial action. Any areas of concern will be escalated to the Network Lead Clinician and the relevant Trust to enable internal governance arrangements to be followed.

3.4.3 Network List of Surgeons Authorised to Perform Laparoscopic Colorectal Cancer Surgery

<table>
<thead>
<tr>
<th>Location</th>
<th>Surgeons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheffield</td>
<td>Mr Shwan Amin, Mr Keith Chapple, Mr Steve Brown, Mr Ian Adam</td>
</tr>
<tr>
<td>Rotherham</td>
<td>Mr Richard Slater, Mr Majid Bassuini, Mr Jeff Garner</td>
</tr>
<tr>
<td>Chesterfield</td>
<td>Mr T Amarnath, Mr Peter Goodfellow, Mr Tim White</td>
</tr>
<tr>
<td>Doncaster</td>
<td>Mr John Bagley, Mr Niraj Khetan, Mr Athur Harikrishnan</td>
</tr>
</tbody>
</table>

The decision about which of the procedures (open or laparoscopic) is undertaken should be made after informed discussion between the patient and the surgeon. In particular, they should consider:

- the suitability of the lesion for laparoscopic resection
- the risks and benefits of the two procedures
- the experience of the surgeon in both procedures.

North Trent Minimum criteria for offering laparoscopic surgery
- BMI less than 30
- No major abdominal surgery
- Avoiding obvious T4 cancers on preoperative staging
- Tumours not requiring TME (total mesorectal excision)
- No clinical or radiological signs of obstruction

It has been agreed by North Trent NSSG that MDTs without core surgical members fully trained in laparoscopic surgery should refer patients to
Referral and Management Guidelines for Colorectal Cancers within North Trent - 2010

other localities with expertise in the provision of laparoscopic colorectal resection, until such time where expertise has developed in that MDT.

3.5 Emergencies Presenting to Non Colorectal MDT Members

Each of the five Trusts within North Trent Cancer network host Colorectal Cancer MDTs. The desired policy of each Trust for colorectal emergencies presenting to surgeons who are not Colorectal MDT members is as follows:

The detail of the policy is as follows:

Where possible patients presenting as an emergency, both within and out-of-hours, to non-members of the colorectal MDT should have their condition stabilised then be passed to the surgical core members of the colorectal MDT for discussion of their further care. This should be by the end of the first working day after presentation.

If however further delay would be life threatening then non-core members of the colorectal MDT should proceed to the treatment that is required to ensure the patients safety. It would be appropriate for a non-colorectal general surgeon to
undertake life-saving surgical intervention for a resuscitated patient on an emergency basis.

The responsibility for referral to the colorectal MDT core member rests with the receiving surgeon.

The methods of contact are compliant with the policy of the individual Trusts and include:
- Direct by phone to consultant of PA
- Person to person contact

In the unlikely event that colorectal expertise is not available locally consider discussion with another unit in the network.

3.6 Colorectal Stenting Policy

Only operators who are competent should carry out stenting procedures in colorectal cancer. In order to be included in the list of operators each individual will have to submit their documentation of training or experience and be able to demonstrate that they are maintaining their expertise as for instance continuing professional development activity. Once this is done the individual will have their name added to the NSSG document detailing the agreed operators below. An audit of procedures will be conducted periodically to ensure standards are maintained.

**Approved List for Colorectal Stenting**

- **Barnsley**
  - Quat Rustum
  - Dan Raw
  - Kapil Kapur
  - Paul Hurlstone
- **Chesterfield**
  - Rathinavel Balamurugan
- **Doncaster**
  - Glyn Williams
  - Matthew Kaduthodil
- **Rotherham**
  - Paul Spencer
  - Richard Slater
- **Sheffield**
  - James Hampton
  - Fred Lee
4.0 Local Excision of Rectal Tumours (Including Villous Adenomas)

TEMS service is currently provided by the Sheffield Colorectal MDT. All patients should be assessed in their local MDT. Patients identified with early rectal cancer suitable for local resection should be referred to the early rectal Cancer MDT, which is part of Sheffield MDT. Referrals are taken from all constituent North Trent Network Trusts.

4.1 Introduction –

- **TEMS**: Transanal Endoscopic Micro Surgery

TEMS is an endoscopic procedure which allows access to the lower 18cm of the Rectum through the anus. The technique is suitable for the removal of polyps and early rectal cancers sparing the patient radical surgery.

This method is appropriate for local resection of:

* Benign polyps are usually sessile tubulo-villous adenomas and can be found throughout the rectum. Even very large and/or circumferential polyps can be resected using TEM
  - Selected early (T1) rectal carcinomas.
  - Palliative procedure for patients unfit for radical surgery.

- **Transanal resection** is appropriate for lesions in the lower third of rectum, particularly those encroaching the dentate line, which are readily accessible using a Lone Star retractor, Parks’ or Eisenhammer retractor. This can be provided in the localities.

4.2 Staging

All rectal cancers have an MRI.

All patients with a possible T1 lesions on the basis of clinical and MRI parameters should be referred for endosonography. STH provide a network service for EUS, this includes Mr Steve Brown, Dr Ragu Vinayagum and Lynn Smith.

In addition Rotherham provide an EUS service for their own local population by Mr Majid Bassuni and Dr Paul Spencer.

**Staging by pre-operative ultrasound**

- EUS for all Villous adenomas referred for TEMS
- Suspected early carcinomas potentially suitable for local excision in order to exclude invasion of the rectal wall by carcinoma
4.3 Indications for Curative Local Excision of early rectal cancer

- Mobile T1 (sm1 and 2) tumours assessed by EUS
- Well or moderately differentiated histology
- No vascular invasion
- Tumour size 3cm or less
- Non ulcerated

4.4 Relative indications (when patient fitness precludes radical surgery) for TEMS

- T2 and T3 tumours assessed by ultrasound (can be followed by radiotherapy)
- Poorly differentiated tumour
- Tumours greater than 3cm

4.5 Contra-indications to TEMS

- Fixed tumour (although palliative local excision may be appropriate in selected cases)
- Some anterior tumours especially in females (proximity of vagina and peritoneal cavity)

- Referral letters should include details of:
  - Height of tumour from anal verge
  - Exact position of tumour ‘on clock face’ as seen on rigid sigmoidoscopy
  - Histology if available

4.6 Surgeons authorised to perform curative local resection of suitable stage 1 rectal cancer

TEMS: Mr Shwan Amin

TRANSANAL ENDOSCOPIC EXCISION: Any colorectal surgeon who is a named core member of a colorectal MDT
5 Adjuvant and Neo-Adjuvant Chemoradiotherapy for Rectal Cancer

5.1 Radiotherapy:

3 Approaches for potentially resectable rectal cancers:

1. Pre-operative:  Operable cancers – short course radiotherapy
                 Inoperable cancers – long course radiotherapy

2. Post-operative: See below

3. Combined chemoradiotherapy:

   Usually pre-operatively, sometimes post-operatively

Mobile tumours: Consider pre-operative short course radiotherapy for T3 or N1 tumours

   Recent evidence from CR07 supports previous trial data that short course pre-operative radiotherapy reduces the risk of local recurrence, improving disease free survival.

   The tumour should be mobile with CT/MRI evidence that it does not involve the fascial plane around the mesorectum or levator ani.

   The patient should be able to tolerate surgery.

Fixed/Advanced tumours: Pre-operative long course chemoradiotherapy.

   The tumour is fixed with CT/MRI evidence that it involves the fascial plane around the mesorectum and/or levator ani.

   The patient should be able to tolerate surgery.
5.2 Short course pre-operative neo-adjuvant radiotherapy

Indication: Operable cancers

Regimen: 25Gy in 5# over 5 days (CT planned four fields)

Treatment given Monday – Friday

Treatment to start as soon as possible following decision to treat

Surgery to be scheduled within 7 days of completion of radiotherapy
(close liaison required between radiotherapy booking and surgical list)

Post-operative adjuvant chemotherapy if appropriate

5.3 Long course pre-operative downstaging neo-adjuvant radiotherapy ± chemotherapy

Indication: Inoperable rectal cancers

Regimen: 45 Gy in 25# (CT planned four fields)

Concurrent capecitabine chemotherapy given on the days the patient receives radiotherapy if patient suitable

Reassessment followed by surgery after at least 6 weeks (may be months later) if downstaging successful

5.4 Post-operative radiotherapy

Indication: Incomplete surgical excision after APER or Anterior resection but not TME:

- Involvement of: Perirectal fat
  Presacral soft tissue
  Perineum

- CRM < 1mm following TME resection

Regimen: 45 Gy in 25# (CT planned four fields)

Concurrent capecitabine chemotherapy, given on the days the patient receives radiotherapy if patient suitable

Consider adjuvant chemotherapy following this if patient suitable and indication for this.
5.5 Chemotherapy

See algorithm: ‘Guidelines for the non-surgical management of colorectal cancer’.

5.6 Adjuvant chemotherapy

Absolute indications: Dukes C colon cancer in patients for whom an improvement in survival of $\leq 10\%$ is worth 6 months chemotherapy (fit patients, usually $\leq 75$ years).

Relative indications: Poor prognosis Dukes B colon and Dukes B and C rectum

(Poor prognosis: pT4, mucinous, poorly differentiated, extramural vascular invasion)

Routine regimen: Capecitabine
3 weekly cycle to total of 8 cycles
Oxaliplatin + Modified de Gramont (Folfox)
Can be given as outpatient via PICC line or as inpatient.
2 weekly cycles to total of 12 cycles
Oxaliplatin + Capecitabine (Xelox)
3 weekly cycle to total of 8 cycles
Consider entry in clinical trials if eligible

Chemotherapy in the management of liver only metastases is discussed in section 7.

5.7 Palliative chemotherapy

Indications: Patients with reasonable prognosis on diagnosis of inoperable metastases with or without symptoms.
Discuss options including trials with your local oncologist via the MDT.

Regimen: 1st Line: Capecitabine (and/or Modified de Gramont 5FU-MdG)
Irinotecan + Modified de Gramont (Folfiri)
Oxaliplatin + Modified de Gramont (Folfox)
Oxaliplatin + Capecitabine (Xelox)
Irinotecan (in those with contraindication to 5FU)

2nd Line:
Oxaliplatin/Modified de Gramont (Folfox)
Oxaliplatin + Capecitabine (Xelox)
Irinotecan + Modified de Gramont (Folfiri)
Irinotecan (in those with contraindication to 5FU)
Oxaliplatin + Raltitrexed (in those with contraindication to 5FU)

3rd Line:
Irinotecan + Modified de Gramont (Folfiri)
Irinotecan (in those with contraindication to 5FU)
Oxaliplatin/Modified de Gramont (Folfox)
Oxaliplatin + Capecitabine (Xelox)
Oxaliplatin + Raltitrexed (in those with contraindication to 5FU)

Bevacizumab and cetuximab may be added to these chemotherapy regimens, accessed through the cancer drugs fund. Line of therapy depends upon the patients SHA.

5.8 Guidelines for the non-surgical management of colorectal cancer

<table>
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<th>Routine Management</th>
<th>Available Clinical Trials</th>
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<td>Dukes A</td>
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<td>No routine adjuvant treatment</td>
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<tr>
<td>Curatively Resectable Metastatic Disease</td>
<td>Liver metastases only (synchronous or metachronous) (N.B. downstaging chemotherapy required: 6 cycles oxaliplatin/5FU or 4 cycles oxaliplatin/capecitabine).</td>
<td>Resectable and synchronous with primary: Peri-operative chemotherapy with, Folfox, Xelox Patient should be seen in joint liver clinic</td>
<td>NewEPOC</td>
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<td>Resectable and metachronous with primary: Patients should be seen in joint liver clinic</td>
<td>NewEPOC</td>
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<td>Liver and/or extrahepatic metastases</td>
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<td>Metastatic Disease not surgically curable</td>
<td>First Line Capecitabine, Folfox, Xelox, Folfiri, Irinotecan</td>
<td>Second Line Folfiri, Folfox, Xelox, Irinotecan Oxaliplatin + raltitrexed</td>
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<td>Third Line Folfox, Xelox, Folfiri, Irinotecan</td>
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</table>
5.9 Chemotherapy algorithms

5.9.1 Inoperable metastatic disease

- Treatment Initiation
  - No cardiac contraindication to 5FU
    - Capecitabine
      - Folfox/Xelox
        - Folfiri/irinotecan
        - Folfox/Xelox
          - Folfiri/irinotecan
          - Folfiri/irinotecan
          - Folfiri/irinotecan
          - Oxaliplatin/tomudex
  - Cardiac contraindication to 5FU

5.9.2 Liver only metastases

- Liver Only Metastases
  - Operable
    - k-ras mutant
      - Folfox/Xelox
    - k-ras wild-type
      - Epoc B
      - Folfox/Xelox
      - New epoc
      - Folfox/Xelox
  - Inoperable but potential for downstaging
    - k-ras mutant
      - Folfox/Xelox
    - k-ras wild-type
      - Folfox + Cetuximab
6 Follow Up

6.1 FOLLOWING RESECTION OF COLORECTAL CARCINOMA

The following investigations are routinely offered to patients, however, it is recognised that there are a cohort of patients whereby and MDT consensus decision is taken that definitive management has been completed and that further follow up would not provide any added benefit for the patient. Under these circumstances a discussion with the patient will be undertaken to agree that follow up would provide no further value.

6.1.1 COLONOSCOPY

If full visualisation pre-op:

- Surveillance colonoscopy at 1 year (NICE revised guidelines 2011)
- 5 years post op

If not fully visualised pre-op:

- Within 6 months post op., then continue routine surveillance.

5 year colonoscopy until aged 75 years. Consider further colonoscopy on an individual patient basis.

6.1.2 CEA LEVELS

CEA levels should be measured:

- within 6 weeks post-op if not done pre-op
- every 3 months in the first 2 years following surgery
- every 6 months thereafter in years 3-5.

Consider continuing follow up if < 45 years at diagnosis

6.1.3 IMAGING

Routine imaging surveillance:

Performed for the early detection of recurrent disease, to identify those patients who may benefit from further treatment.

- A CT of chest/abdomen/pelvis with IV contrast medium is recommended at 9 months and 2 years following surgery.
Following emergency surgery:

In those patients who did not undergo a baseline CT pre-operatively (eg emergency presentation):

- An early post-operative CT is recommended within the first 3 months following surgery, followed by routine surveillance as above.

Following APER:

In patients who have undergone an APER operation, the ‘normal’ post-operative pelvic anatomy on CT can be confusing when trying to decide if there is local recurrence:

- Therefore, it is helpful to have a post-operative CT of the pelvis at about 3 months. This acts as a baseline to compare with the routine scan at 9 months.

This is of particular value in patients at an increased risk of local recurrence.

6.1.4 Duration of imaging surveillance:

The majority of recurrences occur within the first 2 years. If the patient remains asymptomatic, the CEA levels are not elevated and the routine surveillance scans are normal, it is not necessary to continue with routine imaging beyond 2 years.
6.2 SURVEILLANCE FOLLOWING ADENOMA REMOVAL

Baseline Colonoscopy

Low Risk

1-2 adenomas
AND both small (< 1 cm)

Path A

No Surveillance or 5 yr*

Intermediate Risk

3-4 adenomas
OR at least one ≥ 1 cm

Path B

3 yr

Findings at follow up:

Adenomas Follow up
Nil Stop
Low risk Path A
Intermediate risk Path B
High risk Path C

High Risk

≥ 5 small adenomas
OR ≥3 at least one ≥ 3 cm

Path C

1 yr

Findings at follow up:

Adenomas Follow up
Negative, low or intermediate risk Path B
High Risk Path C

For large sessile adenomas removed piecemeal consider three-monthly examination until no residual polyp or surgery.
- Consider: age, comorbidity, family history, accuracy and completeness of examination

6.3 RECOMMENDATIONS FOR COLONOSCOPIC SURVEILLANCE FOLLOWING EXCISION OF MALIGNANT COLORECTAL POLYP

**INVASIVE ADENOCARCINOMA IN POLYP**
(Colonoscopic polypectomy, TART or TEM)

```
Poorly differentiated?
  YES
  NO

Excision Complete?
  NO
  i.e. 2mm margin

  YES

Prominent submucosal invasion present?
  or definite invasion near muscularis propria if muscularis propria in specimen (equivalent to Kikuchi level sm3)

  YES

  NO

Endoscopic Follow Up
At 3, 6, 12 36 months and 5 yearly thereafter to age 75.
```

7 Liver Metastases: Detection and Referral for Surgical Resection

The designated Liver Resection MDT is based in Sheffield. Referrals are taken from all constituent North Trent /South Yorkshire Network Trusts.

7.1 Peri-operative staging

Staging pre-operatively is via CT of chest, abdomen and pelvis.

In emergency cases not staged prior to surgery, CT staging should be performed post operatively.

Liver lesions must not be biopsied at laparotomy.

7.2 Post-operative liver surveillance (after surgery for colorectal primary): To be organised by the Units

CT: 9 and 24 months post operatively (chest/abdo/pelvis).

CEA: Every 3 months for first 2 years post operatively.
    Every 6 months subsequently until 5 years post operatively.

Patients receiving chemotherapy will have CEA surveillance at Weston Park Hospital during chemotherapy, but should be referred back to their surgical team for surveillance once chemotherapy is completed.

7.3 Identification of liver metastases and criteria for referral

All patients with primary colorectal cancer and metastatic disease to the liver (diagnosed on local imaging) should be discussed at the Liver Resection MDTM. This is irrespective of the status of the primary tumour. These include patients with lung metastases.

7.3.1 Presentation – synchronous metastases

Synchronous metastases are detected either by the peri-operative scan or discovered at operation. Decisions regarding treatment of the primary tumour in patients with liver-only metastases should be made on merit at the local colorectal MDTM. These decisions should be communicated as rapidly as possible to the central liver resection MDTM.

Synchronous colorectal and liver resection would not normally be considered unless the patient is undergoing a right sided colonic resection and has easily resectable (usually) left sided liver metastases.
Any cases requiring an urgent opinion should be discussed with the HPB Hotline holder on 07554334978 (mobile).

**Presentation – metachronous disease**

Routine post-operative (after colorectal surgery) follow-up includes post-resection CT scans (9 and 24 months) and serial serum CEA measurements. Liver metastases which develop in the postoperative period will usually be identified by these screening investigations.

### 7.3.2 Initial Scans

Patients should undergo the following investigations:

i. CT chest/abdo/pelvis - will determine the presence of extrahepatic disease (can be done locally in the Units)

ii. MRI scan of liver - will determine the operability and operative strategy of colorectal liver metastases (should be done in Sheffield)

Patients with more than 4 liver metastases or with synchronous metastases and a poor prognosis primary (N2, T4N1, poorly differentiated) may require a PET scan. A decision to perform PET scan prior to liver resection should be taken by the liver MDT.

### 7.3.2 Referral to the liver metastases MDT

All patients with primary colorectal cancer and metastatic disease to the liver (diagnosed on local imaging) should be discussed at the Liver Resection MDTM. The referral should be to the liver resection MDT and not to named individuals. This is irrespective of the status of the primary tumour. These include patients with small volume lung metastases.

### 7.4 Management of Liver Metastases

#### 7.4.1 Synchronous metastases

Synchronous metastases are detected either by the peri-operative scan or discovered at operation (please do not biopsy). Decisions regarding treatment of the primary tumour in patients with liver (and/or lung) metastases should be made on merit at the local colorectal MDTM. These decisions should be communicated as rapidly as possible to the central liver resection MDTM.
Synchronous colorectal and liver resection would not normally be considered unless the patient is undergoing a right sided colonic resection and has easily resectable (usually) left sided liver metastases.

Any cases requiring an urgent opinion should be discussed with the HPB Hotline holder on 07554334978 (mobile).

The management of patients with synchronous liver metastases should be discussed at the Liver Resection MDT taking into account the histology of the primary tumour and the size, number and distribution of liver metastases and fitness of the patient. A PET scan may be indicated where indicators of poor prognosis or aggressive primary tumour is present. These patients may be suitable for consultation at the joint Hepato-Oncology Clinic, however this decision should be made by the Liver MDTM.

### 7.4.2 Metachronous metastases

Patients with metachronous metastases on CT imaging should be referred to the Liver Resection MDTM. They should have an MRI scan in Sheffield if that is the Liver MDT decision. They could then be offered either surgical resection or chemotherapy depending on the disease pattern. Chemotherapy may be given in an attempt to downstage unresectable metastases, or for palliation. The aim of chemotherapy will be defined at the liver mets MDT. If chemotherapy and surgery are both to be considered, patients should be seen in the joint Hepato-Oncology Clinic.

### 7.5 Criteria for referral for second hepatic resection

These patients will be under post-hepatectomy follow-up at Sheffield and if liver recurrence occurs, they should be discussed at the Liver MDTM for consideration of treatment options.

### 7.6 Follow up after liver surgery

Patients being followed up after liver resection should have their follow-up imaging and CEA levels in Sheffield. Luminal follow-up should be conducted at the Units. The local colorectal MDT retain clinical responsibility of the patient at all stages.

### 7.7 Audit

Annual audit should be conducted and reviewed by the North Trent Colorectal Disease Site Group and the North Trent Cancer Network.
8 Colorectal Cancer: Indications for PET Imaging under NORCOM arrangements (version 2.0.1 May 2008)
Final version January 2009 by UK PET-CT Advisory board also referenced

FDG PET CT imaging may be performed

1. To investigate rising CEA (three consecutive rises over 3 months) in a patient fit for surgery or chemotherapy and with normal or equivocal conventional imaging and colonoscopy.

2. To investigate suspected pelvic recurrence following AP (abdomino-perineal) or anterior resection in a patient fit for surgery/chemotherapy/radiotherapy, where other diagnostic imaging is equivocal.

3. To assess disease activity when other modalities (CT/MRI) are equivocal.

4. To assess abnormal tissue in the presence of normal CEA where other diagnostic imaging is equivocal.

5. Prior to resection of resectable pulmonary metastases in a patient who is fit for surgery and where conventional imaging has shown no evidence of disease elsewhere

6. Patients with resectable hepatic metastases and poor prognostic features.

All patients require discussion by full MDT and all imaging reviewed by an experienced consultant colorectal or liver radiologist.

Decisions on surgery, chemotherapy radiotherapy and likely changes to patient outcome should be made by experienced consultant liver, colorectal surgeons and experienced consultant oncologists and radiotherapists.

Whilst the PET-CT advisory board does suggest that all patients with anal cancer suitable for radical radiotherapy should have a scan, it was the conclusion of the NSSG that this would be unlikely to change patient management and therefore not advocated. If in the future the field of radiotherapy would be altered by a PET negative for groin nodes, then a scan would be useful. Until there may be such a change in practice, PET-CT for anal cancer should be reserved for those patients in whom salvage APER is being considered.

All requests must be fully completed by a consultant detailing:
- indication,
- site of suspected disease
- predicted management change depending on the PET outcome

The final decision to perform a PET scan rests with the ARSAC certificate holder for PET.
9  Anal Cancer

All patients with anal cancer should be referred to the designated anal cancer MDT which is part of the Sheffield MDT.

Accurate description of the lesion including:

- size
- position and whether anal margin or anal canal proper relationship to the sphincter complex.

All patients should have and MRI of the anorectum to stage the primary anal lesion.

CT scan should be performed to exclude disseminated disease.

Histopathological diagnosis should be obtained prior to surgery.

Patients with confirmed squamous cell carcinoma of the anus do not require a full colonoscopic examination.

Consideration should be given to a stoma.

1st line treatment is chemo-radiotherapy.

Patients with residual or recurrent disease following chemoradiotherapy requiring salvage surgery should be referred to the anal MDT. This surgery should be performed under the NT network designated specialist Surgeons.

Follow up routine MRI scan should be undertaken at 3, 6, 12 and 24 months. The value of the 6 month scan will be reviewed in 2012.

The colorectal MDT retain responsibility of the patient until a formal request is made to the lead clinician of the anal cancer MDT to take on the management of the patient. The lead clinician will then formally discharge the patient back to the care of the colorectal MDT who will resume clinical responsibility.

The skin MDT refers anal / perianal cancers directly to the colorectal locality MDT who will then refer onto the anal cancer MDT as appropriate.
10 Pathology

Histology relevant to a colonic malignancy of patients referred to the Colorectal MDT should be reviewed by a Consultant Pathologist, who is core member of the MDT.

10.1 Colonic or Rectal Specimens

All colonic specimens should be fixed in formalin as soon as possible after surgery.

10.2 Reporting of colonic specimens including resected rectal cancers (Total Mesorectal Excisions)

- Should be reported or supervised by a Consultant Histopathologist, who is core member of the MDT and is trained and competent in accordance with RCPath minimum dataset and Pelican National Program guidelines.
- Reporting should be by TNM version 5 and Dukes staging systems.
- The specimen should be photographed digitally, prior to inking, on front, back and both lateral aspects to allow audit and feedback of the quality of surgery. Then it should be opened down to just above but not through the tumour. The anterior surface should be preserved to allow assessment of this surface for direct and peritoneal spread.

10.3 Reporting of an adenomatous polyp

Should include:

1. Degree of dysplasia {low or high (WHO)} and/or include the old classification mild, moderate, severe.
2. Presence or absence of stalk invasion with the level of invasion and an appropriate pTNM and if relevant, subdivide submucosal invasion into SM1, 2, 3 or Haggitt Level
3. State whether any poorly differentiated areas, vascular invasion or tumour budding are present as these point to certain directions in terms of treatment.
4. Completeness of excision (if possible to assess)

10.4 High grade dysplasia or DALM lesion in IBD

If high-grade flat dysplasia is diagnosed on a patient with inflammatory bowel disease and this diagnosis is likely to lead to a bowel resection then it is recommended that the biopsies should be co-reported with another pathologist. These cases should be referred to and discussed at the MDT.

10.5 Liver resections for colonic cancer metastasis
Liver resections for colorectal metastasis should be reported or supervised by a consultant histopathologist, who is member of the MDT.

Specimens not reported appropriately should be reviewed by a consultant histopathologist, who is a core member of the MDT.

The histology report should include:

- Number of metastases
- Distance from the surgical margin
- Capsular involvement.
- Metastases should be characterized immunohistochemically, in case of any doubt about the primary site of origin.
11 Guidelines for referral of patients with a family history of colorectal cancer from primary care to a Family History Clinic

The family history of some patients may indicate that they are at increased risk of developing colorectal or related cancers. If an individual has a first degree relative with colorectal cancer under the age of 50 or two first degree relatives at any age then it may be helpful to refer the patient to a colorectal surgical clinic to further assess their risk and for advice about appropriate management. Some hospitals now run a family history clinic under the auspices of the surgical unit. First degree relatives are parents, children, brothers and sisters. First degree kinship is comprised of familial aggregations where affected relatives are first degree relatives of each other with at least one being a first degree relative of the consultand. If both parents are affected, these count as being with in first degree kinship.

The risk of colorectal cancer can be estimated empirically from the individual’s current age, the age at onset of affected relatives and the number and relationship of those relatives.

11.1 Patients who DO NOT require referral and are at low risk:

Individuals who have
• 1 first degree relative who developed colorectal cancer over the age of 50

11.2 Patients who DO require referral to Local Screening Unit:
The level of risk can be stratified into high, high-moderate and low-moderate. Relatives have to be first degree relatives of each other and at least one should be a first degree relative of the consultand.

High Risk
3 or more first degree kinship relatives at any age, with colorectal cancer or with a Lynch syndrome cancer (endometrial, small bowel, ureteric or renal pelvis), at least one of whom is diagnosed under 50 (modified Amsterdam criteria).

High-Moderate Risk
• 3 or more affected relatives in first degree kinship with each other, at any age, with colorectal cancer, none of whom were diagnosed under 50
• 2 first degree kinship relatives with colorectal cancer both diagnosed under 60 or with a mean age of diagnosis under 60.

Low-Moderate Risk
• One first degree relative with colorectal cancer diagnosed under 50
• Two first degree relatives of the consultand with colorectal cancer diagnosed over 60
12 Guidelines for the surveillance of individuals with a family history of colorectal and related cancers

12.1 Low Risk
This group of patients does not require surveillance.

12.2 Low-Moderate Risk
A one-off colonoscopy at age 55. If an adenoma is identified then adenoma surveillance guidance applies.

12.3 High-Moderate Risk
5 yearly colonoscopy commencing at age 50 until age 75. If an adenoma is identified then adenoma surveillance guidance applies.

12.4 High Risk
All patients to be referred to the clinical genetics department

Colonoscopy every 18 – 24 months starting at age 25 until age 75. The family history in some Lynch syndrome families may suggest screening should start earlier. In Lynch syndrome families where gastric cancer has occurred biennial upper gastrointestinal endoscopy from the age of 50 should be considered.

In all the above groups, total colonoscopy is the preferred mode of surveillance. Incomplete colonoscopy should initiate an alternative imaging modality such as double contrast barium enema or CT Colonography, preferably on the same day. A repeat colonoscopy soon after an incomplete examination is acceptable, but success must be assured. Regular radiological surveillance is not recommended due to radiation exposure risks.
13 Guidelines for genetic testing of families with colorectal and related cancers

Patients with colorectal cancer under the age of 50 or a family history that falls into the high-risk group should be offered genetic testing in order to try and identify a mutation in one of the DNA mis-match repair genes.

Patients who undergo genetic testing must:
• Be referred to the Clinical Genetics Department.
• Receive genetic counseling about the implications of a positive result.
• Give informed, written consent for the test.
• If terminally ill, blood can be taken by the referring doctor for DNA storage. Genetic counseling and discussion of testing can be performed at a later stage but the patient must identify a family member to whom the result can be given.

Criteria for a diagnostic genetic test:
• Individual has either colorectal or related cancer.
• Individual comes from a high-risk family that fulfils the modified Amsterdam Criteria. Every effort should be made to confirm the diagnoses. Available resources include hospital and GP notes and the cancer registry. Once a mutation has been identified in an individual a predictive genetic test can be offered to unaffected at-risk individuals within the family.

Criteria for a predictive genetic test:
• Individual should be over 16.
• They should receive genetic counseling prior to the blood being taken which should include:
  1. Screening options
  2. Discussion of prophylactic hysterectomy and oopherectomy in women who have completed their families.
  3. Insurance issues.

MSI and tumor immunohistochemistry

Not all individuals with a mutation in one of the mis-match repair genes will have a family history that fulfils the high risk criteria. Individuals who develop colo-rectal cancer at a young age (under 50) are more likely to have a mis-match repair gene mutation and should be offered micro-satellite instability studies (MSI) and/or tumor immunohistochemistry for the DNA mis-match repair proteins when this test becomes more widely available in the region. Individuals who are MSI-H and/or show loss of protein expression on immunohistochemistry should also be offered genetic testing. Note that MLH1 loss of expression and MSI-H in an elderly patient is usually a somatic epigenetic event.

References
Guidelines for colorectal cancer screening and surveillance in moderate and high risk groups (update from 2002). Cairns S et al. Gut 2010 59;666-689
14. Summary of recommendations for colorectal cancer screening and surveillance in high risk groups

<table>
<thead>
<tr>
<th>Family Groups</th>
<th>Lifetime risk of death from CRC</th>
<th>Screening procedure</th>
<th>Age at initial screen</th>
<th>Screening interval and procedure</th>
<th>Annual procedures / 300 000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familial Adenomatous Polyposis (FAP) and variants (refer to Clinical Genetics)</td>
<td>1 in 2.5</td>
<td>Genetic testing Colonoscopy + OGD</td>
<td>Puberty</td>
<td>Annual colonoscopy until colectomy, flexi sig 12 monthly</td>
<td>6</td>
</tr>
<tr>
<td>Juvenile Polyposis and Peutz Jeghers (refer to Clinical Genetics)</td>
<td>1 in 6</td>
<td>Genetic testing, colonoscopy + OGD</td>
<td>Puberty</td>
<td>2 yearly colonoscopy + OGD small bowel visualisation</td>
<td>6</td>
</tr>
<tr>
<td>MMR gene carrier</td>
<td>1 in 2.5 male</td>
<td>Colonoscopy +/- OGD</td>
<td>25</td>
<td>18-24 monthly colonoscopy</td>
<td>50</td>
</tr>
<tr>
<td>At-risk HNPCC</td>
<td>1 in 6.5 female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 in 5 male</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 in 13 female</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1 first degree relative with MSI-H and IHC shows loss of MSH2, MSH6 or PMS2 expression</td>
<td>1 in 5 male</td>
<td>Colonoscopy +/- OGD</td>
<td>Colonoscopy from age 25</td>
<td>2 yearly colonoscopy</td>
<td>5</td>
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</table>
15.0 Summary of recommendations for colorectal cancer screening and surveillance in moderate risk groups

<table>
<thead>
<tr>
<th>Family Groups</th>
<th>Lifetime risk of death from CRC</th>
<th>Screening procedure</th>
<th>Age at initial screen</th>
<th>Screening interval and procedure</th>
<th>Annual procedures / 300 000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRC in 3 FDR in first degree kinship, none &lt; 50</td>
<td>1 in 6-10</td>
<td>colonoscopy</td>
<td>50</td>
<td>5 yearly colonoscopy to 75</td>
<td>18</td>
</tr>
<tr>
<td>CRC in 2 FDR in first degree kinship, mean age &lt; 60</td>
<td>1 in 6-10</td>
<td>colonoscopy</td>
<td>50</td>
<td>5 yearly colonoscopy to 75</td>
<td>60</td>
</tr>
<tr>
<td>CRC in 2 FDR &gt; 60</td>
<td>1 in 12</td>
<td>colonoscopy</td>
<td>55</td>
<td>Once only colonoscopy at 55</td>
<td>12</td>
</tr>
<tr>
<td>CRC in 1 FDR &lt; 50</td>
<td>1 in 12</td>
<td>colonoscopy</td>
<td>55</td>
<td>Once only colonoscopy at 55</td>
<td>10</td>
</tr>
<tr>
<td>Ulcerative &amp; Crohn’s Colitis</td>
<td>Low risk</td>
<td>Colonoscopy + pan colonic dye spray with targeted bx. If no dye spray then 2 to 4 Bxs every 10 cms</td>
<td>10 yrs from onset of symptoms</td>
<td>5 yearly</td>
<td>20</td>
</tr>
<tr>
<td>Extensive colitis with mild active disease or post inflammatory polyps or family h/o CRC in a FDR &lt;50</td>
<td>Intermediate risk</td>
<td>As above</td>
<td>10 yrs from onset of symptoms</td>
<td>3 yearly</td>
<td>10</td>
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<tr>
<td>Extensive at least moderate colitis or stricture or dysplasia in past 5 years [declining surgery] or PSC or OLT for PSC or CRC in FDR &lt;50y</td>
<td>High Risk</td>
<td>10 yrs from onset of symptoms</td>
<td>Annual</td>
<td>6</td>
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<tr>
<td>Uretero-Sigmoidostomy</td>
<td>FlexiSig</td>
<td>10 years after surgery</td>
<td>Flexi Sig annually</td>
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<td></td>
</tr>
<tr>
<td>Acromegaly</td>
<td>Colonoscopy</td>
<td>40</td>
<td>Colonoscopy 5 yearly</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

PSC: Primary Sclerosing cholangitis, OLT: orthoptic Liver Transplant
16.0 Supportive and palliative care

NB specialist palliative care guidelines and referral processes are currently being updated in line with the specialist palliative care peer review measures. These will be available on the NTCN website.

Supportive and palliative care are cross-cutting issues that affect all cancer patients, at all stages from pre-diagnosis to survivorship, or death. The NICE guidance on supportive and palliative care for adults with cancer (2004) gives definitions of these two terms and tries to explain their distinctions and overlaps. However, there is still considerable confusion and unclear thinking about these concepts, with the important consequence that many patients are being referred inappropriately, too late or not at all to specialist services.

The Sheffield Model for Supportive Care clarifies this area and should be seen as the model which applies to North Trent Cancer Network (Ahmedzai, Walsh, Seminars in Oncology, 2001.)

In essence, supportive care is a wide range of specialist services which work as a ‘virtual team’ to help the patient (and family) cope with the effects of disease, of treatment-related side-effects (acute and long-term) and with the psychosocial and rehabilitation needs for both long-term survivors with cancer and those who are progressing.

Palliative care is a somewhat more restricted range of services, often configured as an actual team, which focuses on symptoms, psychological, social and spiritual issues for patients and their families, when the disease is progressive and will likely lead to death within 6-12 months.

In many acute settings, palliative care teams provide both supportive and end of life care; in community and hospices, they concentrate almost exclusively on end of life care. Specialists who contribute to supportive care for cancer patients, e.g. dieticians, SALT, other AHPs, pain clinic staff, are scattered across a hospital and are often not coordinated. They provide only limited input in community and hospices. It is ideal for cancer MDTs to have their own dedicated supportive care professionals, or at least dedicated sessions from a trust service.

All patients, regardless of the stage of disease or estimated prognosis, are candidates for supportive care and all those who are nearing the end of life are candidates for palliative care. The difficulty arises in identifying which patients need the different specialists inputs of supportive care at which stage. In North Trent we have developed a screening questionnaire – SPARC, which provides a ‘holistic’ assessment of a patient’s needs for symptom control, psychological, social and spiritual issues as well as needs for information, help with daily living, making plans, and other areas. It is recommended that this instrument is used by clinics and wards to identify patients who need supportive and palliative care. An alternative tool is the ‘Distress Thermometer’ – the North Trent Supportive and Palliative Care Group is producing guidelines to advise MDTs to choose one or other of these
tools, as well as other more specific questionnaires for complex pain, psychological distress, etc.

Most acute settings in North Trent have a team of palliative care nurse specialists. Only 4 out of the 5 localities have consultant-level input into these teams. Furthermore, only 3 of out 5 localities have consultants with regular sessions in hospices.

The Sheffield/Chesterfield/Rotherham localities have a 24/7 medical on-call service with first-on registrars (covering Sheffield and Chesterfield) and second-on consultants (covering all three localities). The consultants also provide an informal second-on call service for the specialist palliative care teams in Barnsley and Doncaster/Bassetlaw.

Ideally a member of each trust palliative care team should attend the Urological cancer MDT. However there are currently insufficient staff to support this. Moreover, MDTs are not always configured to pick up and discuss supportive and palliative care issues within the normal agenda. It is recommended that an alternative arrangement is made to cover this by:

1. Routine use of a supportive care screening tool, e.g. SPARC or Distress Thermometer by all clinicians in both in-patient and out-patient settings.

2. Clearly identified routes of referral between the Urology MDT, usually via the CNS but also via medical staff, to a named person in the local palliative care MDT.

3. The ability to timetable discussion of complex supportive or palliative care issues for specific patients in the MDT meeting, e.g. to discuss palliative surgery, difficult pain or respiratory management, transfer to hospice or other settings.

It is recommended that advance care planning for all patients is started as soon as feasible after the diagnosis of an incurable cancer, including the patient’s preferences for place of care in the terminal stage and the use or rejection of interventional medical support, e.g. artificial hydration, CPR.
17.0 Teenager and young adults

In January 2009 specific referral pathways were developed for teenagers (16-18 years) and young adults (19-24 years) into the TYA MDT. These were updated in 2011/12, approved by the NSSG on 25 May 2012 and are available on the NTCN website.
18.0 Rehabilitation Pathway

The NSSG approved the colorectal rehabilitation pathway on 22 January 2010. This is available on the NTCN website.