QUICK REFERENCE FOR HEALTHCARE PROVIDERS

MANAGEMENT OF

COLORECTAL CARCINOMA

Ministry of Health Malaysia

Malaysian Society of Colorectal Surgeons

Malaysian Society of Gastroenterology & Hepatology

Malaysian Oncological Society

Academy of Medicine Malaysia

KEY MESSAGES

1. Colorectal carcinoma (CRC) is the second most common cancer in Malaysia.
2. Screening of CRC should be offered at the age of 50 years & continues until 75 years old for average risk population. Immunochemical faecal occult blood test (IFOBT) is the preferred method.
3. Colonoscopy is the screening method for moderate & high risk groups.
4. All individuals with family history suggestive of a hereditary colorectal cancer syndrome should be referred to a clinical genetics service for genetic risk assessment, where accessible.
5. The use of carcinoembryonic antigen (CEA) is exclusively confined for monitoring & follow-up. It is performed pre-operatively for baseline investigation & surveillance. CEA should not be used as a screening method.
6. Computed tomography (CT) scan should be used for staging & surveillance of CRC. Magnetic resonance imaging (MRI) is the modality of choice in diagnosing & staging of rectal carcinoma.
7. Standardised histopathology reporting proforma incorporating tumour-node-metastasis (TNM) staging system should be used.
8. The mainstay of treatment for CRC is surgical resection, which offers the best curative outcome.
9. Chemotherapy & radiotherapy are used to downstage, as adjuvant therapy & for palliative purposes.
10. In advanced CRC, multidisciplinary team approach in patient management should be practised.

This Quick Reference provides key messages & a summary of the main recommendations in the Clinical Practice Guidelines (CPG) Management of Colorectal Carcinoma.

Details of the evidence supporting these recommendations can be found in the above CPG, available on the following websites:

Ministry of Health Malaysia: www.moh.gov.my
Academy of Medicine Malaysia: www.acadmed.org.my
Malaysian Society of Colorectal Surgeons: www.colorectalmy.org
Malaysian Society of Gastroenterology & Hepatology: www.msgh.org.my
Malaysian Oncological Society: www.malaysiaoncology.org

CLINICAL PRACTICE GUIDELINES SECRETARIAT
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RISK CATEGORIES FOR FAMILY HISTORY WITH CRC

Category	Description	Screening recommendation
Category 1 **Average risk**	No family history & age >50 years	• Perform IFOBT (refer to Algorithm A). • Stop screening at age 75.
Category 2 **Moderate risk**	Family history of CRC either: • ≥1 first-degree relatives (FDR) • 1 FDR & >1 second-degree relatives • >3 & one of them must be FDR	• FDR with CRC diagnosed at age <60 years, colonoscopy should be performed at age 40 or 10 years younger than affected relative (whichever is younger). If normal, repeat every 3-5 years. • FDR with CRC diagnosed at age ≥60 years, colonoscopy should be performed at age 40 years. If normal, repeat every 10 years. • Stop screening at age 75.
Category 3 **High risk**	Family history of: • CRC at age <50 years • Familial adenomatous polyposis (FAP) • Hereditary non-polyposis colorectal cancer (Lynch Syndrome) • Peutz-Jegher Syndrome • Juvenile Polyposis • MUTYH-associated polyposis	• For family history of CRC diagnosed at age <50 years, colonoscopy should be performed at age 40 or 10 years younger than affected relative (whichever is younger). If normal, repeat every 3-5 years. Stop screening at age 75. • For hereditary colorectal cancer syndromes, refer to **Table 5** in CPG.

INDICATIONS TO REFER FOR GENETIC RISK EVALUATION/ASSESSMENT

- Personal history of CRC:
  - before age 50
  - and endometrial cancer at any age
  - and ovarian cancer at any age
  - and stomach, small bowel, biliary or urinary tract cancer at any age
  - and two FDRs with history of colorectal, endometrial or ovarian cancer at any age
- Family history of inherited syndromes such as Lynch, FAP or familial diffuse gastric cancer
- Personal history of 10 or more adenomatous polyps
- Personal history of multiple primary colon cancers at any age
- Cumulative >5 proximal serrated polyps, at least two >10 mm
- Cumulative >20 serrated polyps
- ≥2 juvenile or Peutz-Jeghers polyps

RADIOLOGICAL INVESTIGATIONS

- CT accuracy in identifying CRC & nodal metastases depends on the stage of the tumour. It is not the best modality for the assessment of early CRC.
- Radiological staging for CRC must include contrasted CT thorax.
- Radiological report must include pertinent findings for patient's optimal management e.g. TNM classification.
- MRI staging provides an accurate assessment of rectal carcinoma local spread pre-operatively.
- MRI is the best modality in assessing the relation of the rectal carcinoma with the potential circumferential resection margins (CRM). It predicts whether the surgical resection margin is clear or affected by the carcinoma.
- Contrast-enhanced ^{18}F-fluorodeoxyglucose Positron Emission Tomography CT (FDG PET-CT) is preferred in the detection of extrahepatic metastases & local recurrence of CRC.
- FDG PET-CT has a role in the evaluation of recurrent CRC with elevated CEA & often with equivocal/negative CT.

SURGICAL MANAGEMENT

- A thorough surgical exploration should be performed at the time of resection in CRC.
- Low rectal surgery should be performed by surgeons credentialed in the management of rectal carcinoma.
- Total mesorectal excision (TME) should be performed for middle & low rectal carcinoma.
- If abdominoperineal resection (APR) is required, it should be performed as cylindrical APR.
- Treatment for metastatic CRC should be individualised & guided by a multidisciplinary approach.
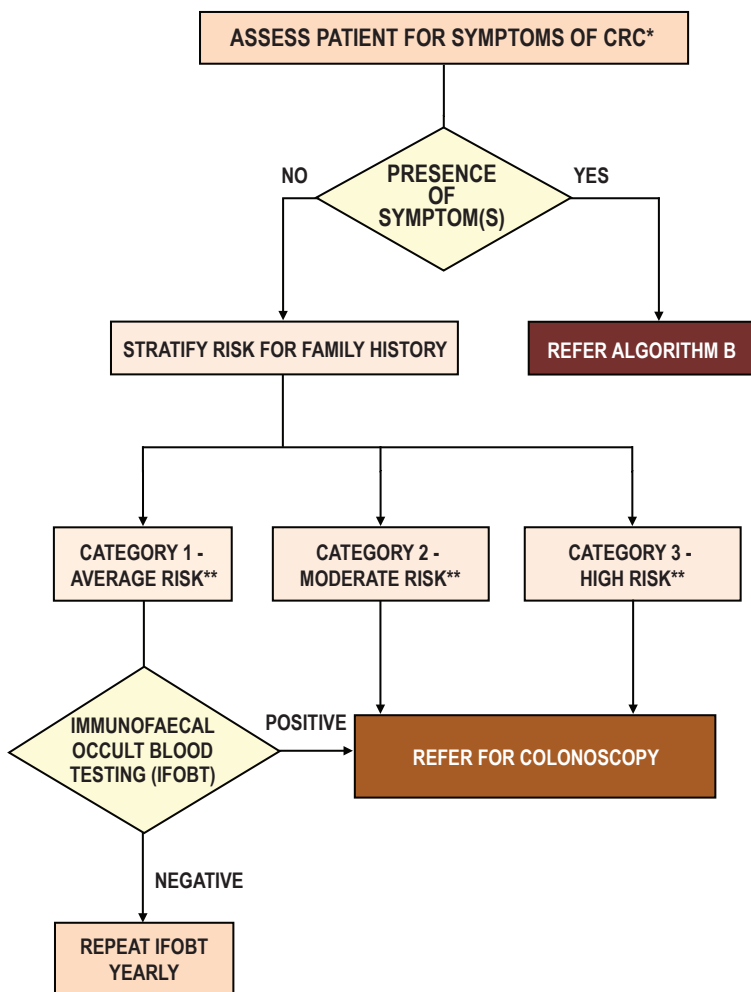
CORE HISTOPATHOLOGICAL DATA REPORTING

Macroscopic core items
- Nature of specimen & type of operation
- Site of tumour
- Maximum tumour diameter
- Distance to nearer longitudinal resection margin
- Relation of tumour to the peritoneal reflection (rectal tumours only)
- Grade of plane(s) of surgical excision (TME for anterior resection & APR specimens)

Microscopic core items
- Histological tumour type
- Histological differentiation
- Maximum extent of local invasion (pT stage) & maximum distance of extramural spread
- Grade of tumour regression following pre-operative (neoadjuvant) therapy
- Resection margins (longitudinal & circumferential margins)
- Lymph nodes status (number present, number involved, highest lymph node status) - minimum of 12 nodes
- Venous invasion
- Perineural invasion

ALGORITHM A: SCREENING FOR COLORECTAL CARCINOMA

ASSESS PATIENT FOR SYMPTOMS OF CRC*

PRESENCE OF SYMPTOM(S)

NO → **STRATIFY RISK FOR FAMILY HISTORY**

YES → **REFER ALGORITHM B**

CATEGORY 1 - AVERAGE RISK**

CATEGORY 2 - MODERATE RISK**

CATEGORY 3 - HIGH RISK**

IMMUNOFAECAL OCCULT BLOOD TESTING (IFOBT)

POSITIVE → **REFER FOR COLONOSCOPY**

NEGATIVE → **REPEAT IFOBT YEARLY**

*Symptoms as outlined in **Algorithm B**.

Refer to **Table 4 on **Risk Categories for Family History with Colorectal Carcinoma**.

ALGORITHM B: PRIMARY CARE REFERRAL FOR SYMPTOMS OF COLORECTAL CARCINOMA

Presence of any of the following signs or symptoms:

- per rectal bleeding
- mucoid stool
- loss of weight or appetite
- abdominal discomfort
- altered bowel habits
- perianal symptoms
- tenesmus
- constipation
- anaemia
- palpable abdominal mass
- palpable anorectal mass

Focused history

- Age and sex
- Rectal bleeding (colour)
- Altered bowel habit (alternating constipation and diarrhoea)
- Perianal symptoms (lump, pruritus, pain, discharge)
- Symptoms of anaemia (look for causes)
- Personal history of colorectal polyps or inflammatory bowel disease, or family history of CRC

Focused physical examination and tests

- Weight
- Look for signs of anaemia
- Abdominal examination
- Digital rectal examination and proctoscopy
- Full blood count

Unexplained rectal bleeding with ≥1 of the following:

- fresh blood
- blood mixed with stool
- with altered bowel habits
- with significant weight loss

AND/OR

Unexplained iron deficiency anaemia

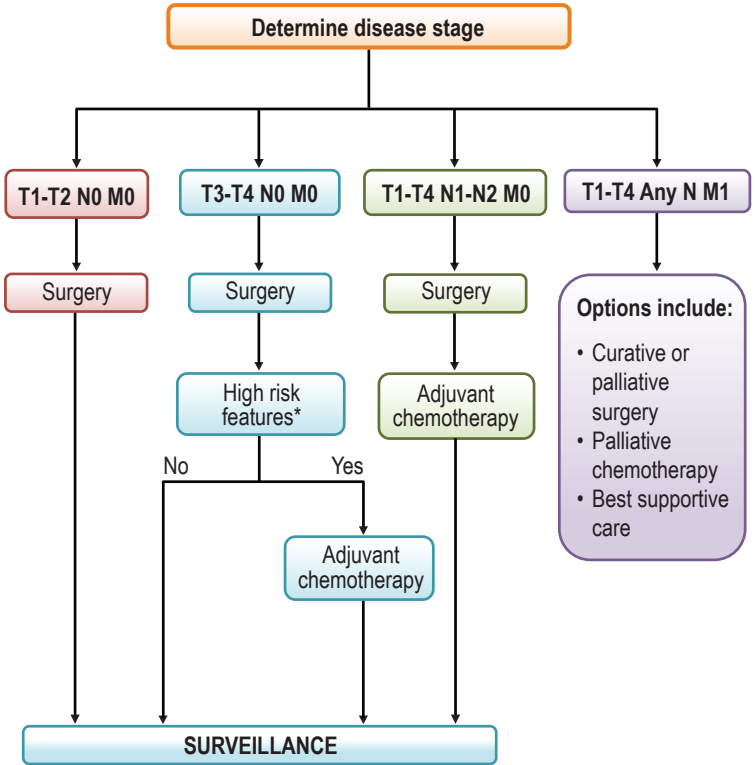**AND/OR**

Palpable abdominal or rectal mass

All other unexplained signs and symptoms that do not meet criteria for urgent referral

Treat signs or symptoms accordingly

Signs & symptoms not resolved in 4-6 weeks
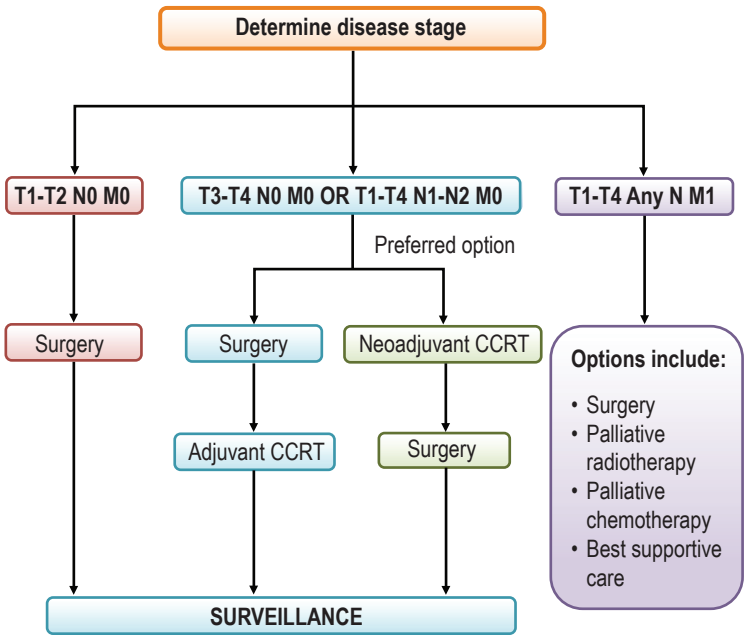
URGENT REFERRAL FOR COLONOSCOPY WITHIN TWO WEEKS

REFER FOR ELECTIVE COLONOSCOPY

ALGORITHM C: TREATMENT FOR COLON CARCINOMA

Determine disease stage

| **T1-T2 N0 M0** | **T3-T4 N0 M0** | **T1-T4 N1-N2 M0** | **T1-T4 Any N M1** |

- **T1-T2 N0 M0** → Surgery
- **T3-T4 N0 M0** → Surgery → High risk features* → No / Yes → (Yes) Adjuvant chemotherapy
- **T1-T4 N1-N2 M0** → Surgery → Adjuvant chemotherapy
- **T1-T4 Any N M1** →

Options include:

- Curative or palliative surgery
- Palliative chemotherapy
- Best supportive care

SURVEILLANCE

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*High risk features for stage II colon carcinoma are presence of any of the following:
- obstruction
- perforation
- T4 disease
- poorly differentiated tumour
- lymphovascular invasion
- perineural invasion
- inadequate lymph node sampling (<12)

ALGORITHM D: TREATMENT FOR RECTAL CARCINOMA

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                    │   Determine disease stage    │
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| T1-T2 N0 M0 | T3-T4 N0 M0 OR T1-T4 N1-N2 M0 | T1-T4 Any N M1 |

Preferred option

| Surgery | Surgery | Neoadjuvant CCRT |

Options include:

- Surgery
- Palliative radiotherapy
- Palliative chemotherapy
- Best supportive care

| Adjuvant CCRT | | Surgery |

SURVEILLANCE

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*High risk features for stage II rectal carcinoma are presence of any of the following:
- obstruction
- perforation
- T4 disease
- positive CRM
- poorly differentiated tumour
- lymphovascular invasion
- perineural invasion
- inadequate lymph node sampling (<12)
- incomplete mesorectum

CCRT = Concurrent chemoradiotherapy