The National Guidelines For Colorectal Cancer Screening and Diagnosis

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Adapted from HAAD Standard for
Colorectal Cancer Screening & Diagnosis 2014
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THE NATIONAL GUIDELINES FOR COLORECTAL CANCER SCREENING AND DIAGNOSIS

1. PURPOSE

1.1. To stipulate the service requirements to deliver the National Colorectal Cancer (CRC) Screening Program in the United Arab Emirates;

1.2. To set out the minimum Clinical Care Standards and frequency for CRC screening as per international evidence-based guidelines;

1.3. To set out the case mix, eligibility criteria and data reporting requirements for Colorectal Cancer Screening; and

1.4. To ensure the population receives quality and safe care and timely referral for diagnosis and/or treatment where appropriate.

2. SCOPE

2.1. These Guidelines applies to all Healthcare Providers (Facilities and Professionals) in the United Arab Emirates, licensed by Ministry of Health and Prevention (MOHAP), providing CRC screening services; including mobile units.

3. DEFINITIONS

3.1. **Colorectal Cancer Screening**: means looking for polyps or cancer in the colon and rectum in people who have no symptoms of the disease. CRC screening includes the following services:

3.1.1. **Colorectal Cancer Screening services**; and 3.1.2. Colorectal Cancer assessment and follow up.

3.2. **Colonoscopy**: Colonoscopy is the endoscopic examination of the large bowel and the distal part of the small bowel with a Charge Coupled Device (CCD) Camera or a fiber optic camera on a flexible tube passed through the anus. It can provide a visual sight to detect adenomatous polyps and cancer diagnosis (e.g. ulceration, polyps). It also grants the opportunity for biopsy or removal of suspected colorectal cancer lesions.

3.3. **Fecal Immunochemical Test (FIT)** is a test that investigates the stool sample for signs of cancer.
3.4. **Case mix:** includes males and females aged 40-75 years determined eligible for colorectal cancer screening services, in accordance with the criteria detailed in these Guidelines.

4. **DUTIES FOR HEALTHCARE PROVIDERS**

All licensed Healthcare Providers; Facilities and Professionals engaged in providing CRC screening services **must:**

4.1. Provide clinical services and patient care in accordance with these Guidelines and in accordance with laws and regulations; policies and standards, of United Arab Emirates; including developing effective recording systems, maintaining confidentiality, privacy and security of patient information

4.2. Comply with the federal requirements; laws and policies for Patient Education and Consent. The licensed provider must provide appropriate patient education and information regarding the screening test and must ensure that appropriate patient consent is obtained and documented on the Patient’s medical record;

4.3. Comply with Federal requirements; laws, policies and standards on managing and maintaining patient medical records, including developing effective recording systems, maintaining confidentiality, privacy and security of patient information

4.4. Comply with Federal requirements; laws, policies and standards for Information Technology (“IT”) and data management, electronic patient records and disease management systems, sharing of screening and diagnostic test, and where applicable pathology results;

4.5. Comply with MOHAP requests to inspect and audit records and cooperate with authorized auditors as required;

4.6. Collect and submit data on screening visits and outcomes, as per Appendix 1, to the National Cancer Screening Registry; at MOHAP

4.7. Comply with Federal laws, policies and standards on cancer case reporting and report all confirmed screening –detected cancers to the National Cancer Registry at MOHAP.
5. ENFORCEMENT AND SANCTIONS

5.1. Healthcare providers, payers and third party administrators must comply with the terms and requirements of these Guidelines. MOHAP may impose sanctions in relation to any breach of requirements under these Guidelines.

6. PAYMENT FOR SCREENING AND FOLLOW UP OF COLORECTAL CANCER:

6.1. Eligibility for reimbursement under the Health Insurance Scheme must be in accordance with local insurance laws for each Emirate.

7. STANDARD 1. CLINICAL SERVICE SPECIFICATIONS

7.1. All licensed Healthcare Screening Facilities providing Colorectal Cancer Screening services must:

7.1.1. Follow best practice for Colo-Rectal Cancer Screening as per Appendix 2;

7.1.2. Adhere to the Clinical performance Indicators and timelines in accordance with Appendix 3;

7.1.3. Coordinate referral of individuals with positive screening for further assessment or treatment with diagnostic and oncology centers and develop an agreed protocol and clear process for referrals.

7.1.4. Maintain records for screening tests, outcomes and clinical performance indicators

7.1.5. Assign a Colorectal Cancer facility program coordinator who will be accountable to:

7.1.5.1. report and submit screening visits and outcome data, specified in section 4; and

7.1.5.2. Establish internal audit policies and procedures and conduct regular audits, monitoring and evaluation to demonstrate compliance with these Guidelines and other associated regulatory policies and standards.

7.1.6. Endoscopy Unit providing Colorectal Cancer Screening, must meet the criteria for a competent unit Infrastructure, Equipment and Personnel, as per Appendix 4;
7.1.7. Have an approved protocol for referral of individuals with screen detected abnormalities for further assessment or treatment

7.2. All licensed Laboratories providing diagnostic histopathology and genetic testing services must:

7.2.1. Have in place the systems, policies and operating procedures in accordance with the requirements of relevant policies and laboratory standards;

7.2.2. Use Specimen Identification and labeling in accordance with relevant policies and standards and industry best practices;

7.2.3. Establish internal audit policies and procedures and conduct regular audits, monitoring and evaluation to demonstrate compliance with these Guidelines and other associated regulatory policies and standards;

7.2.4. Attain, within 18 months from the date of issuance of these Guidelines accreditation by an internationally credible accrediting body recognized by MOHAP such as CAP, ISO 15189(2007), JCI /Lab) for colorectal cancer.

7.2.5. MOHAP may, at its discretion, conduct third-party independent quality assurance testing of laboratories providing colorectal cancer screening test service. Where it does so, providers must comply with the direction and cooperate with the appointed party.

7.2.6. Labs performing FIT test must:

7.2.6.1. Follow the manufacturer’s instructions for use of the FIT testing kit;

7.1.7.2. Use an explicit definition for cut-off levels for hemoglobin concentration;

7.1.7.3. Make provision to record the information concerning the actual amount of hemoglobin, both for tests classified as negative and for those classified as positive;

7.2.8. Labs performing genetic testing, must-have organized and specialist cyto/histopathological support services who can demonstrate compliance with related policies and Laboratory Standards.

Detailed history, such as that described in, Appendix 1, must be evaluated and completed, each time an individual visits for screening. The purpose of this is to identify individuals’ risk status, as per risk categories specified in Appendix 5 and referral to appropriate screening tests.

7.3.1. Obtain informed patient consent prior to screening. Where consent is granted or refused, the treating physician must document and retain signed consent forms on individuals’ medical records;

7.3.2. Inform all individuals of the procedures and expected timeframe to be screened and to receive results;

7.3.3. Ensure that the outcome of screening for Colorectal Cancer is reviewed by a multi-disciplinary team including; gastroenterologist, colorectal surgeon, gastrointestinal oncologist, pathologist, radiologist, medical and a nurse.

7.3.4. Follow up and timely referral of individuals with abnormal results to treatment.

8. STANDARD 2. SCREENING TESTS AND FREQUENCY

8.1. Screening tests for individuals at average risk of colorectal cancer, as specified in Appendix 5, are:

8.1.1. Colonoscopy, every 10 years; or

8.1.2. Fecal Immunochemical Test (FIT) every two years.

8.1.3. Eligible population must be offered colonoscopy screening as per Appendix 2, in case of refusal, the patient should be offered a FIT.

9. STANDARD 3: RECRUITMENT FOR SCREENING

Population eligible for Colorectal Cancer screening may be recruited by the healthcare facilities, through the following:

9.1. Targeted invitation

9.1.1. All CRC screening facilities must establish an invitation system to ensure identification, successful participation and retaining of eligible population;
9.1.2. Targeted invitation may be established via an electronic or manual invitation system;

9.2. Opportunistic

9.2.1. New physician consultation for related or unrelated reason or;

9.2.2. Engagement in a health promotion campaign

10. STANDARD 4. SCREENING WITH COLONOSCOPY

10.1. Pre-Colonoscopy assessment

10.1.1. Pre-colonoscopy documentation must include:

- Patient demographics;
- Anticoagulant and antiplatelet use;
- History of Diabetes Mellitus and use of Insulin;
- Presence of implantable defibrillators or pacemakers;
- Previous Gastrointestinal procedures; including surgeries

10.1.2. Assessment of patient risk: physical status of the patient must be documented in accordance with the American Society of Anesthesiology (ASA), Appendix 6.

10.1.3. ASA class 3 or higher are at higher risk for cardiopulmonary events and appropriate measures must be taken in this respect.

10.1.4. Colonic cleansing: type of bowel preparation must be documented including documentation of careful preparation in accordance with international standards and guidelines.

10.1.5. Inadequate bowel preparations must not exceed 10% of examinations

10.2. Colonoscopy Procedure

10.2.1. Facility specific Policies and Procedures must be in place for the following:

- Colonoscopy decontamination including infection control
- Sedation of patient, considering patient status and preferences and recording of all sedation methods and outcomes; consider involving anesthesia service in patients with significant comorbidities such as patients with ASA 3, 4 and 5 (Appendix 6); and
10.2.1.3. Patient support and comfort, including positioning during the colonoscopy;

10.2.2. To achieve high quality colonoscopy examination, complete intubation of the colon and careful inspection of the mucosa during withdrawal is necessary.

10.2.2.1. If a complete colonoscopy is not achieved, imaging for documentation of incomplete intubation may be necessary and reasons must be clearly documented;

10.2.2.2. Auditable photo documentation of colonoscopy completion must be available including a panoramic image of the appendiceal orifice, ileo-cecal valve and cecum or a video clip with a respective image;

10.2.2.3. Documentation of completion of rectal retroflexion (retroflexion of the endoscope during colonoscopy to increase diagnostic yield) must be recorded

10.2.2.4. Withdrawal times of the colonoscopy from cecum to anus must be documented and must be not less than 6 minutes (when no biopsies or polypectomies are performed). The times to be documented include when:

10.2.2.4.1. Endoscope is inserted into the rectum;
10.2.2.4.2. Withdrawal from cecum was started; and
10.2.2.4.3. Endoscope is withdrawn completely.

10.2.2.5. A record of the actual model and instrument number used must be maintained by the unit staff to track procedure volume, problems, and infection transmission and instrument repairs;

10.2.2.6. Any adverse clinical events (fall in blood pressure, unplanned reversal of sedation medications, oxygen desaturation etc.) that occur during colonoscopy as well all serious events (perforation, bleeding requiring blood transfusion, and/or surgery) must be documented with hard copies attached to the colonoscopy report and reported in accordance with Standards for Adverse Events Management and Reporting;
10.3. **Post-colonoscopy procedures**

10.3.1. Patients must be contacted 24 hours post-procedure or on the next working day to monitor any complications; this contact must be documented;

10.3.2. Patients must receive instructions about management of any potential adverse events following discharge and must be informed that complications may occur within one-four weeks post procedure;

10.3.3. A contact number must be provided to the patient for this purpose and documented in the patient records;

10.3.4. Post procedure complications must be tracked over a 30-day interval after a Colonoscopy; and

10.3.5. Discharge instruction form should be given to patient instructing him to call endoscopy unit or the gastroenterology physician on call or to come to ER in case there is any abdominal pain or any complication or concerns after the procedure. Patient should sign this form acknowledging that he understood the post colonoscopy and the pre-discharge instructions.

10.4. **Colonoscopy findings & Reporting**

10.4.1. Avoid using vague terms to describe polyps in the report

10.4.2. An estimation of the size and dimension of all polyps must be documented, terms such as “large” or “small” must not be used;

10.4.3. Tattoos must be placed for all lesions ≥ 10 mm and those with concerning appearance for cancer to mark the location of colon lesions for repeat colonoscopy or surgery as describe in Appendix 7;

10.4.4. Lesions that are too large to be safely removed must be biopsied and a tattoo injection performed in the vicinity of the lesion and not into the lesion, as described in Appendix 7.

10.4.5. Specimen Identification and labelling must be in accordance with relevant Clinical Laboratory Standards and industry best practices; and

10.4.6. Procedures and protocols for adequate specimen collection, handling, labeling and reporting must be in accordance with
relevant Clinical laboratory Standards and must be communicated to clinical staff and other clients who are involved in the procedures for processing of colorectal specimens.

10.4.7. Each facility must develop a patient colonoscopy report form, retained on the patient’s medical record and made available to auditors. A recommended sample of a standard report is provided in Appendix 8.

10.4.8. A standard colonoscopy report must include at least the following information:

10.4.8.1. Patient demographics and history;
10.4.8.2. Assessment of patient risk and comorbidity;
10.4.8.3. Procedure indications;
10.4.8.4. Procedure: technical description;
10.4.8.5. Colonoscopy findings;
10.4.8.6. Interventions/ unplanned events;
10.4.8.7. Assessment;
10.4.8.8. Follow–up plan; and
10.4.8.9. Pathology.

11. STANDARD 5. SCREENING WITH FECAL IMMUNOCHEMICAL TEST (FIT)

11.1. FIT test must be offered where the patient refuses the screening colonoscopy;

11.2. Patient must be provided with clear and simple instructions regarding collection of sample;

11.3. No drug or dietary restriction is required for FIT and only one stool sample is needed;

11.4. The quality of the sample must be reproducible and representative of the stool, to be of the required volume and be adequately preserved;

11.5. The samples must be analyzed without delay and kept cool to avoid further sample denaturation and a potential increase in false negative results; and
The proportion of unacceptable tests received for measurement must not exceed 3% of all kits received; less than 1% is desirable.

12. STANDARD 6. SCREENING OUTCOMES AND REFERRALS

12.1. At the end of the screening, the screening unit must provide the individuals with a written report with a clear instruction on follow up plan and next steps; including referral for treatment or next screening dates. Also, send feedback to referring physician at the primary or ambulatory health care clinic.

12.2. It is the sole responsibility of the colonoscopies (in case of screening colonoscopy), or the referring physician (in case of FIT) to inform the individuals with their results and next steps.

12.3. The time between completion of a screening test and receipt of results by the participant must be less than 15 working days (acceptable standard >90% within 15 days).

12.4. Screening with Colonoscopy

12.4.1. In case of normal results, negative for polyps, individuals must be re-invited for screening in accordance with the frequencies specified in section 8;

12.4.2. In case of presence of adenoma, colonoscopy must be repeated in accordance with Appendix 2.

12.4.3. Adenoma detection rate must be monitored and audited. It is limited to screening colonoscopies; surveillance procedures and repeat endoscopic procedures are excluded;

12.4.4. Individuals with a positive colonoscopy, cancer, must be urgently referred for treatment, within 2 weeks of receiving colonoscopy report.

12.4.5. The time interval between a positive colonoscopy (cancer) and definitive management must be monitored. (Acceptable standard ≥ 95% of cases must be no more than 31 days).
12.4.6. Death within 30 days after colorectal cancer screening, attributed to complications caused by colonoscopy, must be recorded by e-notification.

12.5. Screening with FIT test:
12.5.1. Individuals with a negative test result are re-invited for screening as per frequencies specified in section 8.
12.5.2. Individuals with a positive test result must be urgently referred for follow-up colonoscopy within 15 working days.
12.5.3. The FIT test must be repeated if results are unclear or spoilt in accordance with Appendix 2.
## APPENDIX 1

### NATIONAL CANCER SCREENING REGISTRY DATA REQUIREMENT: SCREENING VISITS AND OUTCOME

<table>
<thead>
<tr>
<th>Patient Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name</td>
</tr>
<tr>
<td>Middle Name</td>
</tr>
<tr>
<td>Last Name</td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>City of residence</td>
</tr>
<tr>
<td>Nationality</td>
</tr>
<tr>
<td>Marital status</td>
</tr>
<tr>
<td>BMI</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Personal Health History</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal history</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

| Inherited syndrome: HNPCC            | Y / N |
| Inherited syndrome: FAP              | Y / N |
| Family history of colorectal cancer in first or second degree relative? | Y / N |

<table>
<thead>
<tr>
<th>Screening History</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration status</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Method of recruitment</td>
</tr>
<tr>
<td>Invited for screening</td>
</tr>
<tr>
<td>Walk in</td>
</tr>
<tr>
<td>With appointment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Last screening test performed anywhere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colonoscopy (date)</td>
</tr>
<tr>
<td>FIT (date)</td>
</tr>
</tbody>
</table>
# Colorectal Cancer Screening

## A. Screening with Colonoscopy

<table>
<thead>
<tr>
<th>Colonoscopy done</th>
<th>Yes/ No</th>
<th>Date of Colonoscopy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biopsy done</td>
<td>Yes/ No</td>
<td>Was cecum reached</td>
</tr>
<tr>
<td>Complications of colonoscopy</td>
<td>Yes/ No</td>
<td>If yes, specify:</td>
</tr>
</tbody>
</table>

### Colonoscopy report

- Incomplete exam
- Invasive cancer
- Advanced adenoma
- **More than 10 adenomas**
- 3 - 10 adenomas;
- 1-2 tubular adenomas < 1cm
- Hyperplastic polyp
- Unknown histology
- No pathology

### Date patient notified with report

#### Recommended Next Step

- Screening in normal interval
- Refer for treatment

### Referred to other hospital

<table>
<thead>
<tr>
<th>Yes/No</th>
<th>Date of referral</th>
</tr>
</thead>
</table>

## B. Screening with FIT

<table>
<thead>
<tr>
<th>FIT done</th>
<th>Yes/No</th>
<th>Date of FIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIT report</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Inadequate
- Positive
- Negative

### Date patient notified with report

#### Recommended Next Step

- Screening in normal interval
- Repeat test
- Refer for colonoscopy

### Referred to other hospital

<table>
<thead>
<tr>
<th>Yes/No</th>
<th>Date of referral</th>
</tr>
</thead>
</table>
APPENDIX 2

colo-rectal cancer screening and diagnosis pathway

Patient attends for colo-rectal cancer screening*

Pre-screening education and counseling*

Determine risk
Appendix 5

Increased or High Risk
Coloscopy as indicated by treating physician

Average or Increased/High risk
Average Risk

Baseline Colonoscopy

Refuse

Fecal Immunochrometric Test (FIT)

Negative

Offer colonoscopy

Repeat FIT

Positive

No adenoma

Adenoma/s with removal

Re-invite for routine recall; FIT every 2 years &/or colonoscopy every 10 years

A. Low Risk
1 or 2 adenomas < 10 mm

Colonoscopy after 5 years $^$

Findings at follow up

No adenoma

Low risk adenoma

Intermediate risk adenoma

High risk adenoma

Stop surveillance

A

B

C$^*$

B. Intermediate Risk
3 or 4 adenomas < 10 mm
OR
at least one is $\geq$ 10 mm

Colonoscopy after 3 years

Findings at follow up

No adenoma

Low or intermediate risk adenoma

High risk adenoma

B$^*$

B

C$^*$

C. High Risk
5 or more adenomas < 10 mm
OR
$\geq$ 3 adenomas, at least one is $\geq$ 10 mm or larger

Colonoscopy after 1 year

Findings at follow up

No adenoma

Low risk adenoma

Intermediate risk adenoma

High risk adenoma

Negative, No
adenomas or low or intermediate risk

B$^*$

C$^*$

C$^*$

$^*$ Physician consultation; new patient or existing patient identified during visit for other purpose

** Health educator: new patient as per request by physician or existing patient

$^*$ Urgent referral to oncology center within 2 weeks

$^*$ Consider age, comorbidity, family history, accuracy and completeness of examination High risk adenoma C$^*$

# Stop surveillance if there is a further negative result (no adenoma)

$^*$ All histopathologically diagnosed cancers should be treated as per colon cancer guidelines. Reference:

* Adapted from The British Society of Gastroenterology and the Association of Coloproctology for Great Britain and Ireland (2009). Guidelines for Colorectal Cancer Screening and surveillance in moderate and high risk groups (updates from 2002).
APPENDIX 3

COLORECTAL CANCER CLINICAL PERFORMANCE INDICATORS

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Acceptable level</th>
<th>Desirable level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening uptake (participation) rate</td>
<td>&gt;45%</td>
<td>&gt;65%</td>
</tr>
<tr>
<td>Minimum number of screening colonoscopies undertaken annually by each screening colonoscopist</td>
<td>&gt;150 per annum</td>
<td>&gt;300</td>
</tr>
<tr>
<td>Inadequate FIT Rate (proportion of people screened with one or more FIT returned none of which were adequate)</td>
<td>&lt;3%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Maximum time between screening FIT test and receipt of result should be 15 days</td>
<td>&gt;90%</td>
<td>&gt;95%</td>
</tr>
<tr>
<td>Rate of referral to follow-up colonoscopy after positive FIT test (detects cancer)</td>
<td>90%</td>
<td>&gt;95%</td>
</tr>
<tr>
<td>Maximum time between referral after positive screening FIT test and conducting a follow-up colonoscopy should be 31 days</td>
<td>&gt;90%</td>
<td>&gt;95%</td>
</tr>
<tr>
<td>Cecal intubation rate (CIR). Follow-up and screening colonoscopies to be recorded separately (unadjusted CIR with photographic evidence)</td>
<td>&gt;90%</td>
<td>&gt;95%</td>
</tr>
<tr>
<td>Adenoma Detection Rate (ADR)</td>
<td>≥35% of colonoscopies</td>
<td>Auditable outcome</td>
</tr>
<tr>
<td>Cancer Detection Rate</td>
<td>≥2 per 1000 screened by FIT ≥11 per colonoscopies</td>
<td>Auditable outcome</td>
</tr>
<tr>
<td>Withdrawal time in negative colonoscopies (withdrawal from cecal pole to anus)</td>
<td>≥ 6 minutes</td>
<td></td>
</tr>
<tr>
<td>Polyp retrieval rate (retrieval of polypectomy specimens for histological analysis per colonoscopist)</td>
<td>&gt;90 per 100 polyps excised</td>
<td>&gt;95% per 100 polyps excised</td>
</tr>
<tr>
<td>Rate of high-grade neoplasia reported by pathologists in a colonoscopy screening program</td>
<td>&lt;5%</td>
<td></td>
</tr>
<tr>
<td>Rate of high-grade neoplasia reported by pathologists in a FIT screening program</td>
<td>&lt;10%</td>
<td></td>
</tr>
<tr>
<td>Endoscopic complications of colonoscopy screening programs</td>
<td>Bleeding &lt;1:150 Perforation 1:1000</td>
<td></td>
</tr>
<tr>
<td>Post polypectomy perforation rate</td>
<td>&lt;1:500</td>
<td>Auditable outcome</td>
</tr>
<tr>
<td>Time interval between positive colonoscopy and start of definitive management within 31 days</td>
<td>&gt;90%</td>
<td>&gt;95%</td>
</tr>
</tbody>
</table>

† Excellent: no or minimal solid stool and only clear fluid requiring suction
Adequate: collections of semi-solid debris that are cleared with washing/suction
Inadequate: solid or semi-solid debris that cannot be cleared effectively
Ω Numerator: number of polyps with histological tissue retrieved for analysis.
Denominator: number of polyps recorded during lower GI endoscopies.

Reference:
APPENDIX 4

COLORECTAL CANCER SCREENING ENDOSCOPY UNIT INFRASTRUCTURE, EQUIPMENT AND PERSONNEL

Endoscopy Unit Infrastructure and Equipment must:
1. Include facilities for adequate pre-colonoscopy assessment, recovery and be designed to allow efficient patient flow.
2. Match the demand with respect to unit capacity (e.g. Equipment and Personnel).
3. Provide video-endoscopes that facilitate focal application of the dye for the detection and assessment of high-risk colo-rectal lesions.
4. Provide adequate supply of accessories suited to the endoscopic interventions undertaken.
5. Provide properly maintained resuscitation equipment in the endoscopy rooms and recovery areas.
6. Conduct a regular review of all the functioning and cleansing of the Colonoscopies. The review should be available at all times in the unit.
7. Plan capacity that matches demand for screening.
8. Referral to colonoscopy to be within 31 days from a positive FIT test (detects the presence of occult blood in the fecal sample)

Criteria Colorectal Cancer Screening Core Team to include:
All members in the Colo-rectal Cancer Core Team should participate in regular Multidisciplinary Team meetings to discuss each patient with Colo-rectal Cancer.
1. At least 2 Gastroenterologists: each conduct a volume of minimum 150 per colonoscopist per year with a cecal completion rate of > 90%
2. Nurse: two nurses trained to provide support, assistance, information and advice to every patient. An in-depth understanding of colorectal cancer (diagnosis, treatment, prognosis, staging and importance of stage at diagnosis), an in-depth understanding of the colorectal screening process (including screening theory and particularly the potential benefits and harms of screening, and the prime importance of quality assurance) and advanced communication skills.
APPENDIX 5

RISK ASSESSMENT FOR COLO-RECTAL CANCER

Average risk:
1. Age ≥ 40.
2. No history of adenoma or Colorectal Cancer.
3. No history of inflammatory bowel disease.
4. Negative family history.

Increased risk:
1. Personal history of adenoma, sessile serrated polyp (SAP) **, Colorectal Cancer, Inflammatory Bowel Disease.
2. Positive family history of first or second degree relative with Colorectal Cancer (screening recommendations vary depending on family history).

**Increased risk based on personal history of adenoma(s)/ sessile serrated polyp(s) found at colonoscopy:
   a. Low risk adenoma: ≤ 2 polyps, < 1 cm, tubular.
   b. Advanced or multiple adenomas: high grade dysplasia, ≥ 1 cm, villous (> 25% villous), between 3-10 polyps (fewer than 10 polyps in the setting of a strong family history or younger age (<40 years) may sometimes be associated with an inherited polyposis syndrome).
   c. More than 10 cumulative adenomas (fewer than 10 polyps in the setting of a strong family history or younger age (<40 years) may sometimes be associated with an inherited polyposis syndrome).
   d. Incomplete or piecemeal polypectomy (ink lesion for later identification) or polypectomy of large cancer.

High risk:
1. Hereditary Non polyposis Colo-rectal Cancer (HNPCC)
2. Polyposis syndromes (Classical Familial Adenomatous Polyposis (FAP-1), Attenuated Familial Adenomatous Polyposis (AFAP-1), MYH associated Polyposis (MAP-1), Peutz-Jeghers Syndrome (PJS-1), Juvenile Polyposis Syndrome (JPS-1), Hyperplastic Polyposis Syndrome (HPP-1)
# APPENDIX 6

## AMERICAN SOCIETY OF ANESTHESIOLOGY CLASSIFICATION SYSTEM

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Patient has no organic, physiologic, biochemical, or psychiatric disturbance (healthy, no comorbidity).</td>
</tr>
<tr>
<td>2</td>
<td>Mild-moderate systemic disturbance caused either by the condition to be treated surgically or by other pathophysiologic processes (mild-moderate condition, well controlled with medical management; examples include diabetes, stable coronary artery disease, stable chronic pulmonary disease).</td>
</tr>
<tr>
<td>3</td>
<td>Severe, systemic disturbance or disease from whatever cause, even though it may not be possible to define the degree of disability with finality (disease or illness that severely limits normal activity and may require hospitalization or nursing home care; examples include severe stroke, poorly controlled congestive heart failure, or renal failure).</td>
</tr>
<tr>
<td>4</td>
<td>Severe systemic disorder that is already life threatening, not always correctable by the operation (examples include come, acute myocardial infarction, respiratory failure requiring ventilator support, renal failure requiring urgent dialysis, bacterial sepsis with hemodynamic instability).</td>
</tr>
<tr>
<td>5</td>
<td>The moribund patient who has little chance of survival.</td>
</tr>
</tbody>
</table>
APPENDIX 7

TECHNIQUES FOR COLONOSCOPIC TATTOOING PROTOCOL

**Indications**
- Prior to surgery to localise pathology
- To mark lesions for endoscopic surveillance
- There is no need to tattoo for:
  - Lesions in the caecum
  - Rectal lesions up to 10cm
  - However, if in doubt, then place a tattoo

**Equipment**
- Primed varical injection needle with 10ml syringe filled with normal saline
- 5ml syringe filled with Spot® or India Ink
- 0.9% sterilised saline (Ink made up to 5ml with normal saline)

**Procedure**
- Direct needle at an angle to mucosa
- Raise a blub using 1.2ml of saline
- Swap to syringe filled with Spot® or India Ink
- Inject 1ml into the blub to create tattoo
- Swap to syringe filled with saline and flush ink out with 1ml saline before removing needle

**Tattoo positioning**

*Place 3 tattoos 3cm DISTAL to lesion*
*Place 3 tattoos 3cm PROXIMAL to lesion*
*Place 3 tattoos 3cm DISTAL to lesion*
*Place 3 tattoos at 120° 3cm from lesion*
## APPENDIX 8

### A SAMPLE OF A STANDARD COLONOSCOPY REPORT

**Section 1: Patient demographics**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date of birth</th>
<th>Gender</th>
<th>MRN</th>
<th>Associated diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>□ M</td>
<td>□ F</td>
<td></td>
</tr>
</tbody>
</table>

**Section 2: Colonoscopy procedure**

<table>
<thead>
<tr>
<th>Informed consent signed</th>
<th>Indication for colonoscopy</th>
<th>ASA risk</th>
<th>Date</th>
<th>Time (24 hrs.)</th>
<th>Physical exam conducted</th>
<th>Patient, procedure confirmed</th>
<th>Performed by</th>
<th>Preparation and technique</th>
<th>Bowel preparation</th>
<th>Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Yes □ No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>□ Yes □ No</td>
<td>□ Yes □ No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Antibiotic prophylaxis given? □ Yes □ No

### Monitoring during procedure

<table>
<thead>
<tr>
<th>Premedication</th>
<th>Patient position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endoscope model</td>
<td>Endoscope manufacturer</td>
</tr>
</tbody>
</table>

Procedure tolerated? □ Yes □ No

Complications (state any):
<table>
<thead>
<tr>
<th><strong>Route of entry</strong></th>
<th><strong>Extent of examination</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If incomplete examination, state reason</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Method of verifying extent</strong></td>
<td><strong>Duration of colonoscopy withdrawal (minutes)</strong></td>
</tr>
<tr>
<td><strong>Rectal retro flexion performed?</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Cecum identified by Photographic of appendicular orifice?</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Positive Findings</strong></td>
<td><strong>Finding:</strong></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Extent</strong></td>
<td><strong>Severity</strong></td>
</tr>
<tr>
<td><strong>Characterized by</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Consistent with</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Removal method</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Mass</strong></td>
<td><strong>Number</strong></td>
</tr>
<tr>
<td><strong>Location(s)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Descriptors</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Removal method</strong></td>
<td><strong>Retrieval</strong></td>
</tr>
<tr>
<td><strong>Photo documentation attached?</strong></td>
<td>Other findings?</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Discussed with patient?</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Section 4: Impression and plan

<table>
<thead>
<tr>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] Colo-rectal carcinoma [ ] Other (state other)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
</tr>
</thead>
<tbody>
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<table>
<thead>
<tr>
<th>Follow up</th>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th>Counselled</th>
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</thead>
<tbody>
<tr>
<td></td>
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</table>