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| **2N — Appropriate colonoscopy in the management of hereditary colorectal cancer** |
| **Summary of Intervention** |
| Colorectal carcinoma (CRC) is one of the most common cancers in the UK with more than 40,000 new cases diagnosed each year. An estimated 35% of CRC is due to heritable factors.  While colonoscopy is a safe procedure, there is a small risk of complications – including pain, intestinal perforation or major haemorrhage as well as issues related to any sedative used. Colonoscopy should therefore be used  appropriately in the management of CRC in people who have been identified with an increased lifetime risk of CRC due to hereditary factors.  **This guidance applies to adults aged 19 years and over.** |
| **Number of interventions in 18/19** |
| **415,262** |
| **Proposal** |
| Follow the British Society of Gastroenterology surveillance guidelines for colonoscopy in the management of hereditary colorectal cancer: <https://www.bsg.org.uk/resource/guidelines-for-the-management-of> hereditarycolorectal-cancer.html.  **Family history of CRC**  For individuals with moderate familial CRC risk:  — Offer one-off colonoscopy at age 55 years  — Subsequent colonoscopic surveillance should be performed as determined by post-polypectomy surveillance guidelines.  For individuals with high familial CRC risk (a cluster of 3x FDRs with CRC across >1 generation):  — Offer colonoscopy every 5 years from age 40 years to age 75 years.  **Lynch Syndrome (LS) and Lynch-like Syndrome**  For individuals with LS that are *MLH1* and *MSH2* mutation carriers:  — Offer colonoscopic surveillance every 2 years from age 25 years to age 75 years.  For individuals with LS that are *MSH6* and *PMS2* mutation carriers:  — Offer colonoscopic surveillance every 2 years from age 35 years to age 75 years.  For individuals with Lynch-like Syndrome with deficient MMR tumours without hypermethylation/BRAF pathogenic variant and no pathogenic constitutional pathogenic variant in MMR genes (and their unaffected FDRs), and no evidence of biallelic somatic MMR gene inactivation:  — Offer colonoscopic surveillance every 2 years from age 25 years to age 75 years.  **Early Onset CRC (EOCRC)**  For individuals diagnosed with CRC under age 50 years, where hereditary CRC symptoms have been excluded:  — Offer standard post-CRC colonoscopy surveillance after 3 years  — Then continue colonoscopic surveillance every 5 years until eligible for national screening.  **Serrated Polyposis Syndrome (SPS)**  For individuals with SPS:  — Offer colonoscopic surveillance every year from diagnosis once the colon has been cleared of all lesions >5mm in size  — If no polyps ≥ 10mm in size are identified at subsequent surveillance examinations, the interval can be extended to every 2 years.  For first degree relatives of patients with SPS:  — Offer an index colonoscopic screening examination at age 40 or ten years prior to the diagnosis of the index case  — Offer a surveillance colonoscopy every 5 years until age 75 years, unless polyp burden indicates an examination is required earlier according to post-polypectomy surveillance guidelines.  **Multiple Colorectal Adenoma (MCRA)**  For individuals with MCRA (defined as having 10 or more metachronous adenomas):  — Offer annual colonoscopic surveillance from diagnosis to age 75 years after the colon has been cleared of all lesions >5mm in size  — If no polyps 10mm or greater in size are identified at subsequent surveillance examinations, the interval can be extended to 2 yearly.  **Familial Adenomatous Polyposis (FAP)**  For individuals confirmed to have FAP on predictive genetic testing:  — Offer colonoscopic surveillance from 12-14 years  — Then offer surveillance colonoscopy every 1-3 years, personalised according to colonic phenotype.  For individuals who have a first degree relative with a clinical diagnosis of  FAP (i.e. “at risk”) and in whom a *APC* mutation has not been identified:  — Offer colorectal surveillance from 12-14 years  — Then offer every 5 years until either a clinical diagnosis is made and they are managed as FAP or the national screening age is reached.  **MUTYH-associated Polyposis (MAP)**  For individuals with MAP:  — Offer colorectal surveillance from 18-20 years, and if surgery is not undertaken, repeat annually.  **For monoallelic MUTYH pathogenic variant carriers:**  — The risk of colorectal cancer is not sufficiently different to population risk to meet thresholds for screening and routine colonoscopy is not recommended.  **Peutz-Jeghers Syndrome (PJS)**  For asymptomatic individuals with PSJ:  — Offer colorectal surveillance from 8 years  — If baseline colonoscopy is normal, deferred until 18 years, however if polyps are found at baseline examination, repeat every 3 years.  For symptomatic patients, investigate earlier.  **Juvenile Polyposis Syndrome (JPS)**  For asymptomatic individuals with JPS:  — Offer colorectal surveillance from 15 years  — Then offer a surveillance colonoscopy every 1-3 years, personalised according to colorectal phenotype.  For symptomatic patients, investigate earlier.  For some patients with multiple risk factors for CRC, for example those with Lynch Syndrome and inflammatory bowel disease/multiple polyps, more frequent colonoscopy may be indicated. This needs to be guided by clinicians but with a clear scientific rationale linked to risk management. |
| **Rationale for Recommendation** |
| This recommendation is based on the 2019 guidelines published by the British Society of Gastroenterology, the Association of Coloproctologists of Great British and Ireland and United Kingdom Cancer Genetics Group. The complete guidelines can be found here: https://www.bsg.org.uk/resource/guidelinesfor-the-management-of-hereditary-colorectal-cancer.html.  Heritable factors account for approximately 35% of CRC risk, and almost 30% of the population in the UK have a family history of CRC. It is possible to stratify individuals to identify cohorts of patients with hereditary risk. This can help target management and determine who will benefit the most from colonoscopic surveillance and at what frequency. |
| **References** |
| 1. Guidelines for the management of hereditary colorectal cancer from the British Society of Gastroenterology (BSG)/ Association of Coloproctologists of Great Britain and Ireland (ACPGBI)/ United Kingdom Cancer Genetics Group (UKCGG) https://www.bsg.org.uk/resource/guidelines-for-the-managementof-hereditary-colorectal-cancer.html.  2. NICE Colorectal cancer [NG151]: https://www.nice.org.uk/guidance/ng151.  3. NICE Colorectal cancer prevention: Colonoscopic surveillance in adults with ulcerative colitis, Crohn's disease or adenomas guideline [CG118]: https://www.nice.org.uk/guidance/cg118.  4. Cancer Research UK. Colonoscopy. Available from: https://www.cancerresearchuk.org/about-cancer/cancer-in-general/tests/colonoscopy. |