RISK CATEGORIES FOR INDIVIDUALS ELIGIBLE FOR SCREENING FOR A GENETIC SUSCEPTIBILITY TO COLON CANCER

Testing for Hereditary Non-Polyposis Colon Cancer (HNPCC)

If a tumour sample is unavailable, germline testing may proceed on the youngest, living, affected individual from families meeting criteria 1 & 2 ONLY.

1. Affected and unaffected individuals from families with a known HNPCC causing mutation.

2. Affected individual from Amsterdam I and II families. Family must meet all of the following criteria: Three affected relatives with any combination of colorectal, endometrial, small bowel, ureter, transitional cell kidney cancer (urothelial), sebaceous adenoma/carcinoma and/or keratoacanthoma. One should be a first-degree relative of the other two. At least 2 successive generations should be affected. At least 1 diagnosis must be before age 50. Tumour type should be confirmed by review of pathology or other medical records.

3. Affected individuals from families with: Three affected individuals, one with colorectal cancer, and the other two with any combination of colorectal, endometrial, small bowel, ureter, sebaceous adenoma/ carcinoma, ovarian, pancreatic, kidney (transitional cell cancer only), gastric, primary brain or primary hepatobiliary cancer. Two of the three family members must be in a first-degree relationship. At least one diagnosis under the age of 50. FAP should be excluded. Tumours should be verified by pathological examination.

4. Individual affected with CRC and a second primary HNPCC-associated cancer (as listed in #3). This includes synchronous and metachronous colorectal cancers. At least one primary cancer must be diagnosed under age 55. Families are eligible with or without family history of HNPCC-associated cancer, and tumours should be verified by pathological examination.

5. Individual diagnosed with CRC under the age of 35. Families are eligible with or without family history of HNPCC-associated cancer, and tumours should be verified by pathological examination.

6. One case of CRC<50, with a 1st or 2nd degree relative with one of the following HNPCC-related cancers diagnosed <50; colorectal, endometrial, small bowel, ureter, urothelial, sebaceous adenoma/carcinoma or keratoacanthoma.

7. Individuals with immunodeficient tumours (regardless of family history) as follows: MSH2 deficient tumour +/- MSH6 deficiency (sequence and MLPA of MSH2 gene only). MSH6 (only) deficient tumour (sequence and MLPA of MSH6 gene only). MLH1 deficient tumour in individual < age 60 (sequence and MLPA of MLH1 gene only).

Testing for Familial Adenomatous Polyposis (FAP)

Families eligible for testing:

1. Affected and unaffected individuals from families with a known FAP causing mutation.

2. Individuals with clinical confirmed FAP (100 or more adenomas).

3. Individuals with putative attenuated FAP, that is, 10 or more histologically confirmed adenomas. Cumulative pathology and endoscopy reports are required to confirm that the total number and histology are appropriate. A referral with less than 10 adenomas (including hyperplastic polyps) will be excluded. Testing for HNPCC will precede APC testing if individuals meet HNPCC testing criteria.