Hereditary GI Cancer Syndromes

Genetic testing and surveillance across hereditary gastrointestinal cancer syndromes.

2015 ACG Clinical Guideline
Genetic Testing & Management of Hereditary GI Cancer Syndromes
Syngal et al. · Am J Gastroenterol 2015;110:223–262

GRADE — Strong Rec — Conditional Rec

1 Lynch Syndrome

STATEMENT	GRADE
Colonoscopy every 1–2 years starting age 20–25y; consider annual in confirmed mutation carriers	1 · Strong
Colectomy with IRA preferred for CRC/neoplasia not endoscopically controllable; segmental colectomy an option with regular surveillance	2 · Conditional
Hysterectomy + BSO offered to mutation carriers who have completed childbearing, optimally age 40–45y	2 · Conditional
Endometrial/ovarian screening: annual endometrial biopsy + transvaginal ultrasound from age 30–35y if surgery deferred	2 · Conditional
Gastric/duodenal screening: consider baseline EGD with biopsy at 30–35y; treat H. pylori; re-screen q3–5y if family history	2 · Conditional
Screening beyond population-based recs for **urinary tract, pancreas, prostate, breast** not recommended without specific family history	2 · Conditional
Daily aspirin may reduce CRC/extracolonic cancer risk — evidence not yet robust enough for a standard recommendation	2 · Conditional

2 Adenomatous Polyposis — FAP / AFAP / MAP

STATEMENT	GRADE
Annual colonoscopy or flex sig from puberty in classic AP syndromes; colonoscopy specifically for AFAP/MAP	1 · Strong
Colectomy indications: documented/suspected cancer, significant symptoms (absolute); >6mm adenomas, rising adenoma count, or unsurveyable colon (relative)	1 · Strong
Upper GI screening (EGD + duodenoscopy) from age 25–30y; repeat per Spigelman stage (0=4y, I=2–3y, II=1–3y, III=6–12mo, IV=surgical evaluation)	1 · Strong
Annual thyroid ultrasound for FAP, MAP, and attenuated polyposis	2 · Conditional
Biannual AFP + ultrasound for affected infants until age 7y (hepatoblastoma screening)	2 · Conditional
Postsurgical surveillance: yearly rectal/pouch endoscopy; ileostomy exam every 2y	1 · Strong

3 Hamartomatous Syndromes & Cowden Syndrome

SYNDROME	SURVEILLANCE / MANAGEMENT	GRADE
Peutz–Jeghers (PJS)	Monitor colon, stomach, small bowel, pancreas, breast, ovary, uterus, cervix, testes; consider annual chest imaging in smokers (lung cancer risk, no formal screening)	2 · Conditional
Juvenile Polyposis (JPS)	Screen colon, stomach, small bowel; colectomy/IRA or proctocolectomy/IPAA for polyp-related symptoms or endoscopically unmanageable polyps; cardiovascular + HHT evaluation in SMAD4 carriers	2 · Conditional
Cowden (PTEN)	Screen colon, stomach, small bowel, thyroid, breast, uterus, kidney, and skin (melanoma)	2 · Conditional

4 Serrated Polyposis Syndrome (SPS)

STATEMENT	GRADE
Colonoscopy every 1–3 years with attempted removal of all polyps >5mm	2 · Conditional
Surgery indications: uncontrollable serrated polyp growth or cancer development; colectomy/IRA reasonable given metachronous neoplasia risk	2 · Conditional
No evidence supports **extracolonic surveillance**; family member screening unclear — individualize per baseline evaluations	2 · Conditional

5 Hereditary Pancreatic Cancer

STATEMENT	GRADE
Surveillance ideally at **experienced multidisciplinary centers** — known mutation carriers (PJS, hereditary pancreatitis, FAMMM) or familial pancreatic cancer kindreds with an affected first-degree relative; BRCA1/2, PALB2, ATM, LS families limited to those with an affected first/second-degree relative	2 · Conditional
EUS and/or MRI annually starting age 50y, or 10y younger than earliest family pancreatic cancer; **PJS: start at 35y**	2 · Conditional
Pancreatic cystic lesions found on surveillance require evaluation at an experienced high-risk center; surgical decisions individualized via multidisciplinary assessment	2 · Conditional

6 Hereditary Diffuse Gastric Cancer

2 — **Prophylactic gastrectomy** after age 20y (>80% lifetime risk by age 80); **breast cancer surveillance** in women from age 35y with annual mammography, breast MRI, and clinical exam every 6 months; **colonoscopy** from age 40y in families with colon cancer.

Syngal S, Brand RE, Church JM, et al. ACG Clinical Guideline: Genetic Testing and Management of Hereditary Gastrointestinal Cancer Syndromes. *Am J Gastroenterol.* 2015;110(2):223–262.