Colonic Polyposis Syndromes Testing Algorithm

**Adenomatous polyps**
- **Patient's clinical and/or family history** is suggestive of a specific syndrome:
  - Lynch syndrome (*MLH1, MSH2, MSH6, and PMS2* genes)
  - Familial adenomatous polyposis syndrome (*APC* gene)
  - *MUTHY/MYH*-associated polyposis syndrome
- Consider a multigene panel:
  - HCRC / Hereditary Colon Cancer Multi-Gene Panel

**Nonadenomatous (ie, hamartomas, serrated, hyperplastic, juvenile, etc) or mixed (adenomatous and nonadenomatous) polyps**
- **Patient's clinical and/or family history** suggests multiple differential diagnoses
- Consider a multigene panel:
  - PTEN hamartoma tumor syndrome (*PTEN* gene)
  - Cowden syndrome (*PTEN* gene)
  - Bannayan-Riley-Ruvalcaba syndrome (*PTEN* gene)
  - Proteus syndrome (*PTEN* gene)
  - Proteus-like syndrome (*PTEN* gene)
  - Peutz-Jeghers syndrome (*STK11* gene)
  - Juvenile polyposis syndrome (*SMAD4 and BMPR1A* genes)
  - *MUTHY/MYH*-associated polyposis syndrome

- **<10 polyps**
  - Refer to: Lynch Syndrome Testing Algorithm
  - Order appropriate single gene test:
    - APCZ / *APC* Gene, Full Gene Analysis
    - MYHZ / *MUTHY* Gene, Full Gene Analysis

- **≥10 polyps**
  - Patient's clinical and/or family history* suggests multiple differential diagnoses
  - Consider a multigene panel:
    - HCRC / Hereditary Colon Cancer Multi-Gene Panel
  - Order appropriate single gene test:
    - PTENZ / *PTEN* Gene, Full Gene Analysis
    - STKZ / *STK11* Gene, Full Gene Analysis
    - SMADZ / *SMAD4* Gene, Full Gene Analysis
    - BMPRZ / *BMPR1A* Gene, Full Gene Analysis
    - MYHZ / *MUTHY* Gene, Full Gene Analysis

* For patients with a positive family history, refer to: Full Gene Analysis/Multi-Gene Panels versus Familial Mutation Targeted Testing Algorithm.