Colorectal cancer prevention (high risk groups)

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Panel members:

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Presented by GUMS

GLDRC

- The 3rd common cancer in males
- The second common cancer in females

High risk

- Personal or family history of CRC
- Personal or family history of adenomatous or ssp
- IBD
- Cystic fibrosis
- +ve family history
- Genetic syndromes
- Abdominopelvic radiation

Case 1

- A 38-year-old male with rectal bleeding since 4 months ago referred to our hospital for further evaluation .
- All lab data was normal
- colonoscopy revealed a large pedunculated polyp at rectum. It was measured up to 20x10mm in diameters .
- Enbloc resection was done
- pathology evaluation consist of with tubular adenoma with high grade dysplasia.

- Age?
- Type of polyp?
- Size of polyp?
- What are the criteria for advance polyps?
- What percentage of adenomatous polyps are at risk of developing colon cancer after a few years?

- Approximately two-thirds of all colonic polyps are adenomas.
- Increasing age is a risk factor for the development of colonic adenomas and is associated with the development of high-grade dysplasia within an adenoma, independent of size and histology .
- Only a small minority of adenomas progress to cancer (5 percent or less) over 7 to 10 years.
- The risk of progression is higher for **advanced adenomas** (adenoma with high-grade dysplasia, >10 mm in size, or a villous component)

- Do you offer to him surveillance colonoscopy?

- Yes
- 3yrs later

- If the person's intestinal polyp is cut into pieces, when is the next screening time?

- In patients who have undergone **piecemeal resection** of a large polyp (≥20 mm) or in whom the completeness of resection is uncertain (regardless of polyp size), we perform a repeat colonoscopy to evaluate the site of excision **within six months**

- Colonoscopy was performed after 3 years and no polyps were found.

- What will the next follow-up look like?

- If no adenomas are found on the first surveillance colonoscopy, the next surveillance colonoscopy should be performed in five years.

- Patients with an advanced adenoma at any examination appear to remain at high risk for CRC and should have short follow-up interval for all subsequent surveillance colonoscopies
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- If the first surveillance colonoscopy is normal (no adenomas, SSP, hyperplastic polyp ≥10 mm, or CRC) or if only one to two tubular adenomas are detected, the next surveillance colonoscopy should be performed at five years.
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- If three to four tubular adenomas <10 mm are detected, the next surveillance colonoscopy should be performed in three to five years.
- If an advanced adenoma is detected or 5 to 10 adenomas <10 mm are detected, the next surveillance colonoscopy should be performed in three years.

- What is your plan for his family?

- Indications for enhanced screening
- Specific aspects of the family history of CRC influence the age at which to begin screening and the frequency of screening.
- Obtaining family history permits determination of the number of FDRs diagnosed with ANY of the following:

- We suggest using the information about first-degree relatives (FDRs) with ANY of the above to screen as follows, in keeping with the NCCN guidelines
- One or more FDR diagnosed at any age –Begin screening at age 40 years, or 10 years before the FDR's diagnosis, whichever is earlier (or in the case of an advanced polyp, at the age of diagnosis of the advanced polyp if that is earlier).

- Colorectal cancer (CRC)
- Documented advanced polyp with ANY of the following:
- •Advanced adenoma:
- -Adenoma size ≥1 cm
- -Adenoma with high-grade dysplasia
- -Adenoma with villous elements
- •Advanced serrated lesion:
- -Sessile serrated polyp (SSP) ≥1 cm
- -Traditional serrated adenoma ≥1 cm
- -SSP with cytologic dysplasia

- He has a brother and two sisters that the youngest of whom is 30 year old .
- Screening was done for his family and all colonoscopy were normal.

- Whats your next plan for them?

- We screen with colonoscopy **every five years.**
- We note that in the case of advanced polyps, the **NCCN guidelines** recommend repeating **screening every five to ten years**.
- Due to lack of evidence supporting a specific screening interval and based on expert opinion, we utilize the **more conservative** end of this range (**every five years**)

- What's your prefer modality for screening?

- **Colonoscopy is the preferred test for patients at higher risk, as defined above**

- **Patients who refuse to undergo colonoscopy should be encouraged to undergo CRC screening with another screening test.**
- **For such patients, FIT may be an attractive alternative because it is noninvasive .**
- **However, maintaining the screening schedule can be a challenge because FIT should be repeated annually.**
- **A positive FIT requires timely follow-up with colonoscopy.**

- When should screening be stopped?

- Although there is no direct evidence to guide when to end CRC screening among people with a family history, the MIcrosimulationScreening Analysis (MISCAN)-Colorectal Cancer Model suggested that
- CRC screening should end at age 79 among persons with one FDR diagnosed after age 50,
- End at age 85 for persons with two or more FDRs diagnosed before age 40 unless the patient has a life expectancy less than 10 years.

Continuing to screen until age 80 or 85 years is reasonable because the absolute risk of CRC attributable to family history increases with age, since the risk is cumulative

- Do you recommended genetic testing to the patient?

- Approximately 5 to 10 percent of colorectal cancers are attributable to a hereditary cancer predisposition syndrome.
- A hereditary cancer predisposition syndrome should be considered inpatients who present with early age at onset of polyps or cancer or unusual numbers or histologies of cancers or premalignant conditions.

- What would you do if this person's polyp was invasively poorly differentiated carcinoma and was completely removed?

- surgery

Case 2

- The patient, a 48-year-old man with a history of ulcerative colitis, presented in the form of pancolitis since 12 yrs ago.
- Now he has no any particular complaint.

- How long?
- With what extent intestinal involvement?

Does this patient need bowel cancer screening at this stage?

- **In all patients with ulcerative colitisand Crohn disease involving one third of the colon or more we perform screening colonoscopy 8 years after disease or symptom onset to initiate surveillance for colorectal neoplasia.**

- Colonoscopy is performed for screening and high-grade dysplesia is reported in a random sample.

- What do you suggest to the patient at this stage?

- Review the report by another pathologist
- Perform a high definition chromoendoscopy with target and random biopsy Give the patient a full explanation

- **What is the next step if a patient is found to have a lesion on chromoendoscopy?**

- Removal of the lesion
- Perform chromoendoscopy 6 months later
- If no lesion is found, chromoendoscopy should be performed annually.

- If no lesion is found What is the next step?

- Give the patient a full explanation
- According to ASGE, the presence of HGD without a visible lesion is equivalent to surgery

- If the patient undergoes surgery for dysplasia, does he or she need colonoscopic screening?

- Yes, it should be done every year

- Is there a need for colonoscopic screening if the same patient undergoes surgery due to severe and uncontrollable bleeding without any dysplasia in the pathology?

Yes, every one to three years

If a person has

- psc
- chronic pouchitis or cuffitis
- CD pouch
- If more than 8 years have passed since uc
- If there is a family history of colon cancer in a first-degree relative.

- Personal history of CRC
- Juvenile adenomatous polyposis
- FAP
- Lynch syndrome

Personal history of CRC(in all stages)

- (1.5-3% chance of metachronus crc in first 5 yrs)

First Colonoscopy (one yr later)

Second Colonoscopy (3 yr later)

3rd Colonoscopy(every 5 year)

Rectal cancer

- **Neoadjuvant therapy**
- **Chemoradiation**
- **surgery**

Screening in persons with family history of **serated polyposis**

- **We begin screening first degree relatives of individuals with serated polyposis syndrome around age 40 (or 10 years earlier than the earliest age at presentation of the sps in the family.)**
- **We continue surveillance every 5 years if no polyps are detected**

Advance adenom

- Presence of more advance adenomas predicts a higher rate of both any and advanced metachronous adenomas.
- **Adenoma >=10mm**:1st surveillance colonoscopy in **three years**

Familial adenomatous polyposis (FAP)

- Start Colonoscopy at 10-15 years old
- Start Endoscopy at 25-30 years old
- Thyroid sonography
- Treatment:surgery

Juvenile polyposis syndrome

- **5 or more juvenile polyps** in the colorectum
- Individuals who meet clinical criteria for JPS **should undergo genetic testing**
- Screening with **colonoscopy and endoscopy** should be started **at the age of 12 years** old and then **repeated annually.**

Factors increase the risk of colorectal cancer

- **Age>50**
- **Colorectal polyps**
- **Family and genetic history**
- **IBD**
- **Cystic fibrosis**
- **…**

Symptoms of colorectal cancer

- Constipation or diarrhea
- Rectorrhagia
- Weight loss
- Abdominal pain…

Prevention of colorectal cancer

- Polypectomy
- Work up >50 y/o
- High fiber and low fat diet…