

# Colon Cancer – The Preventable Killer

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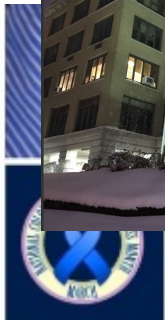
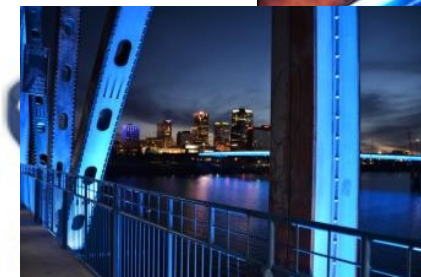
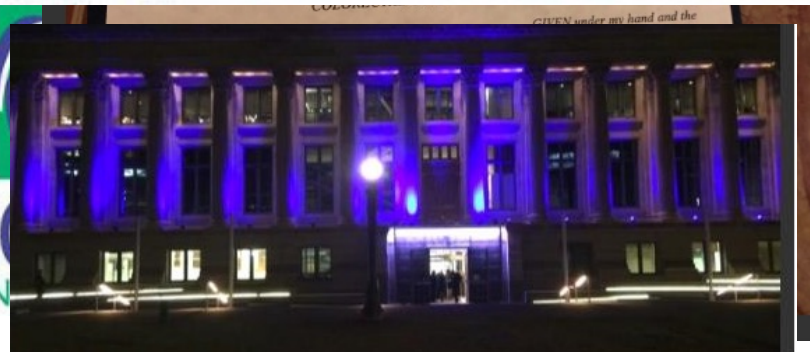
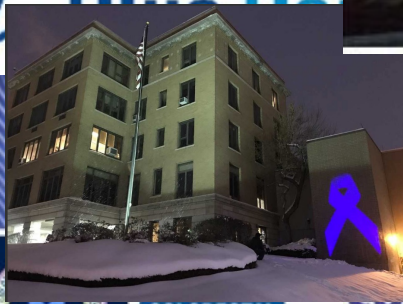


# March Is Colorectal Cancer Awareness Month



Prom

on in 2019



COLORECTAL  
CANCER

COLORECTAL  
AWARENESS

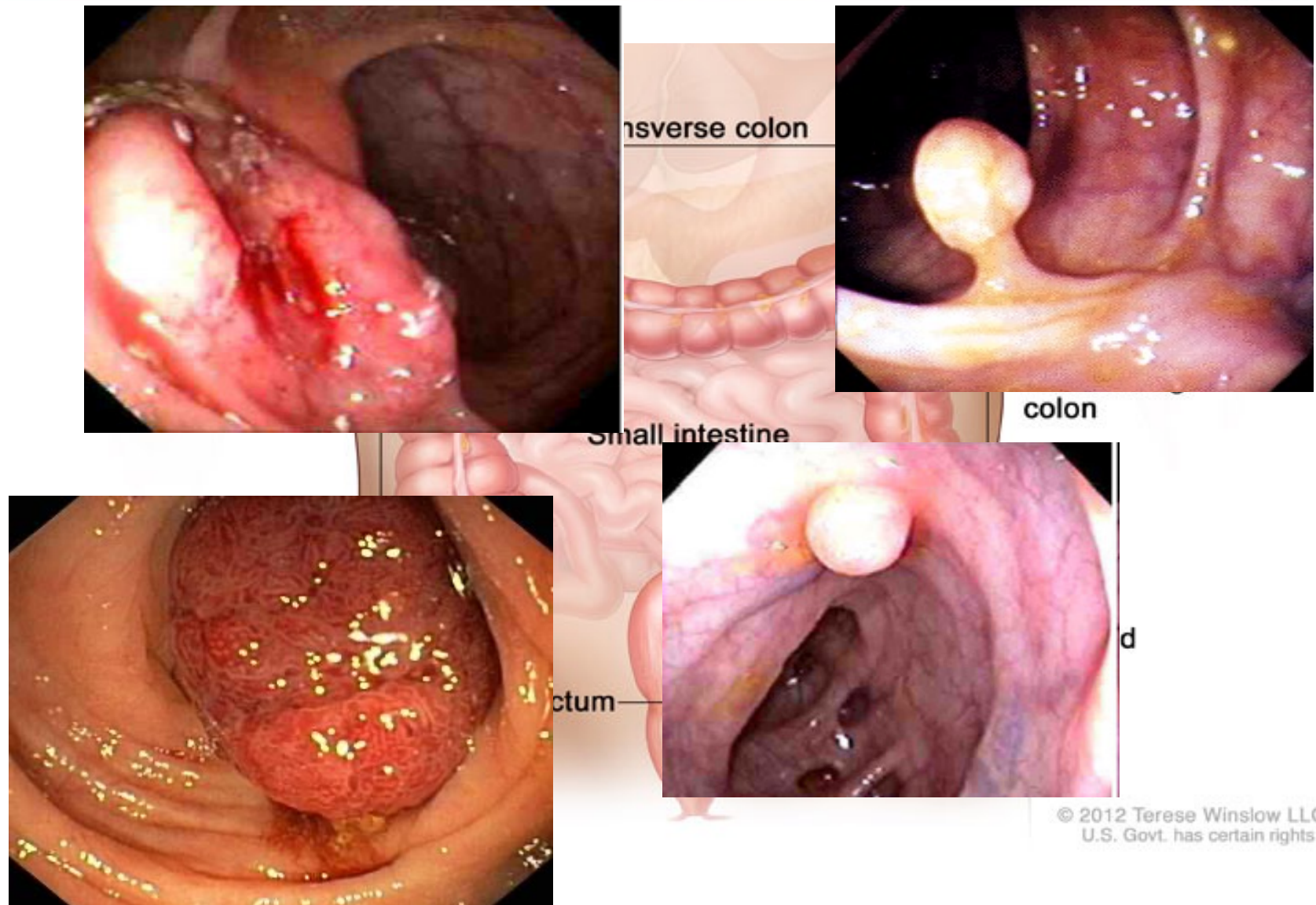
COLON

Colorectal cancer is the result of a sequence of biologic events. It is:

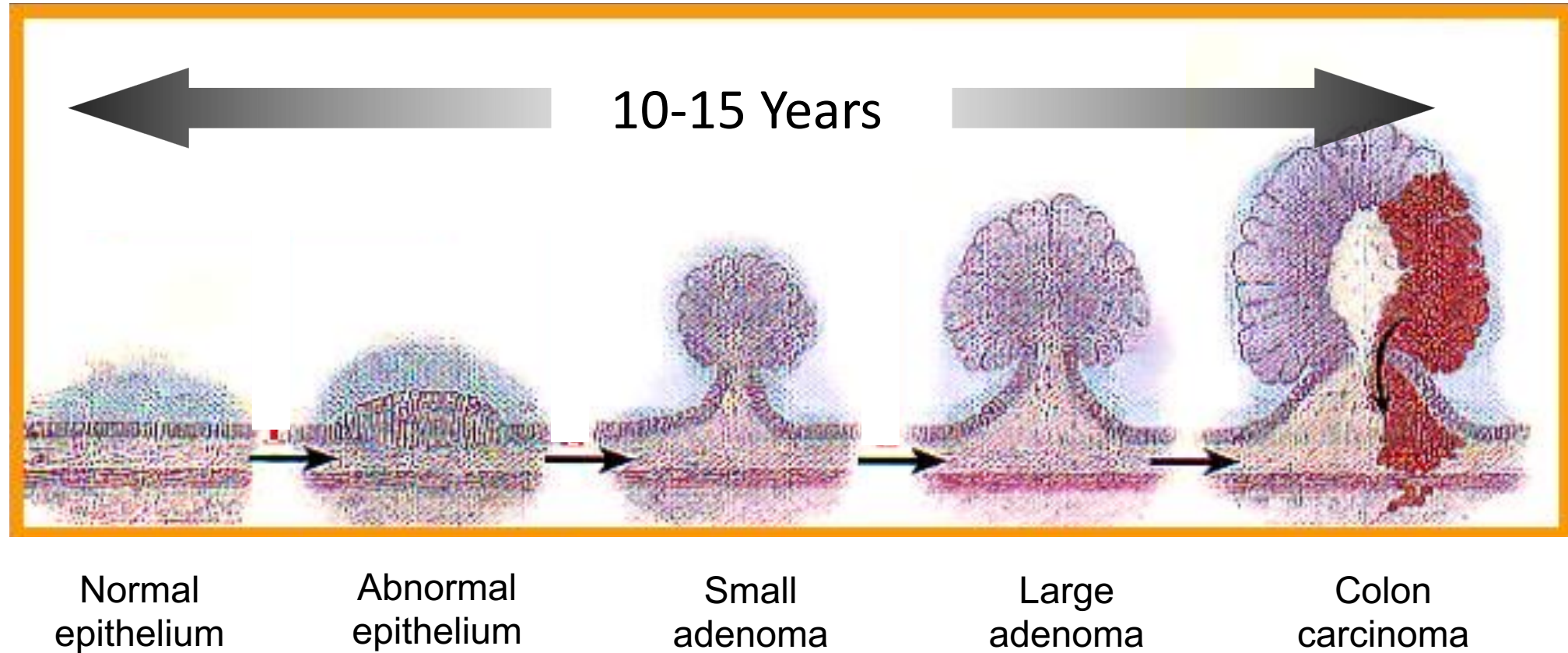
- Common
- Lethal
- Preventable



# What is Colorectal Cancer?

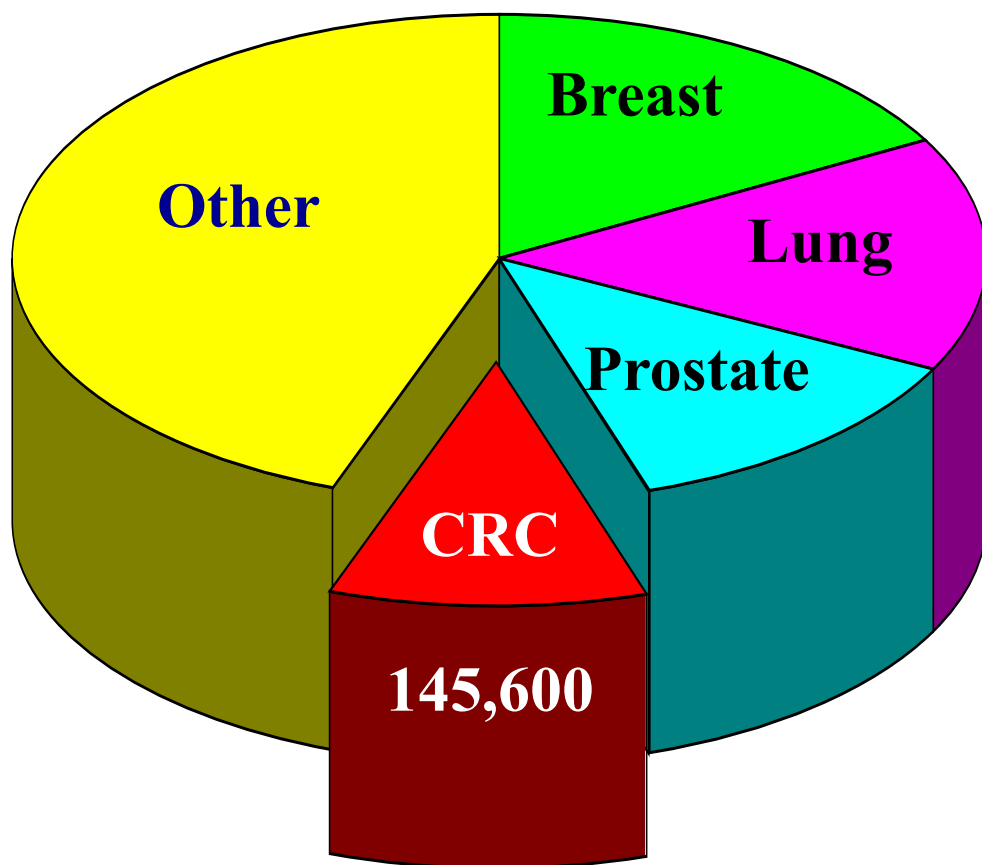


# The Adenoma Carcinoma Sequence

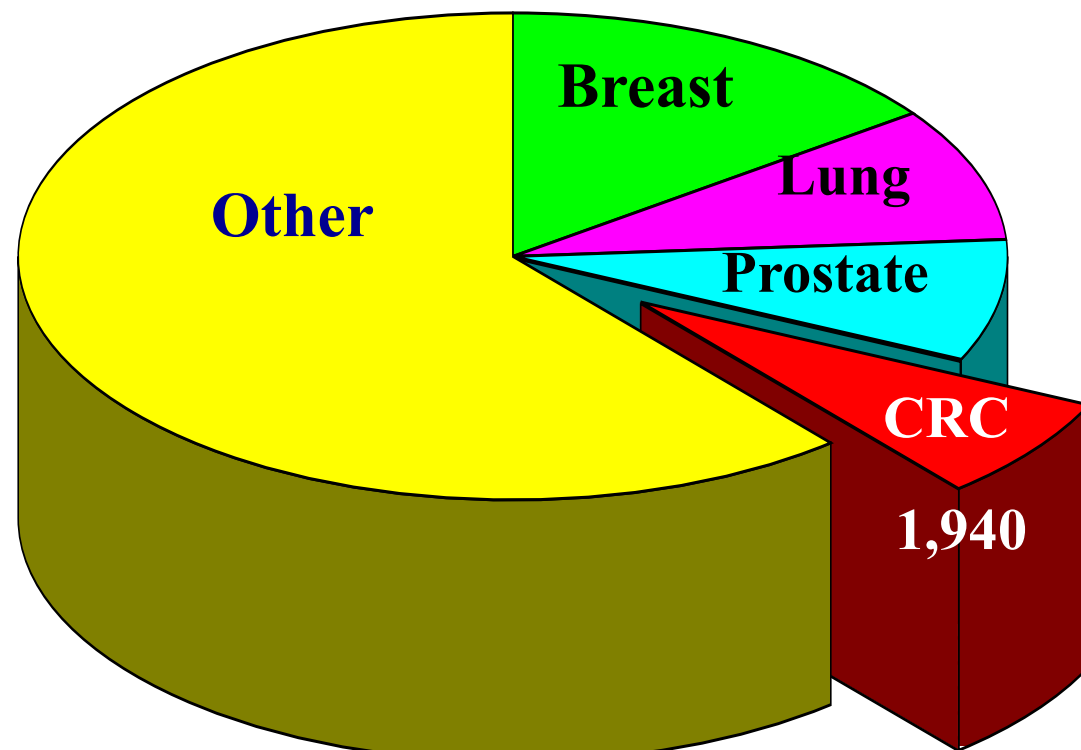


# CRC is Common

**United States**  
**New Cases - 1,762,450**

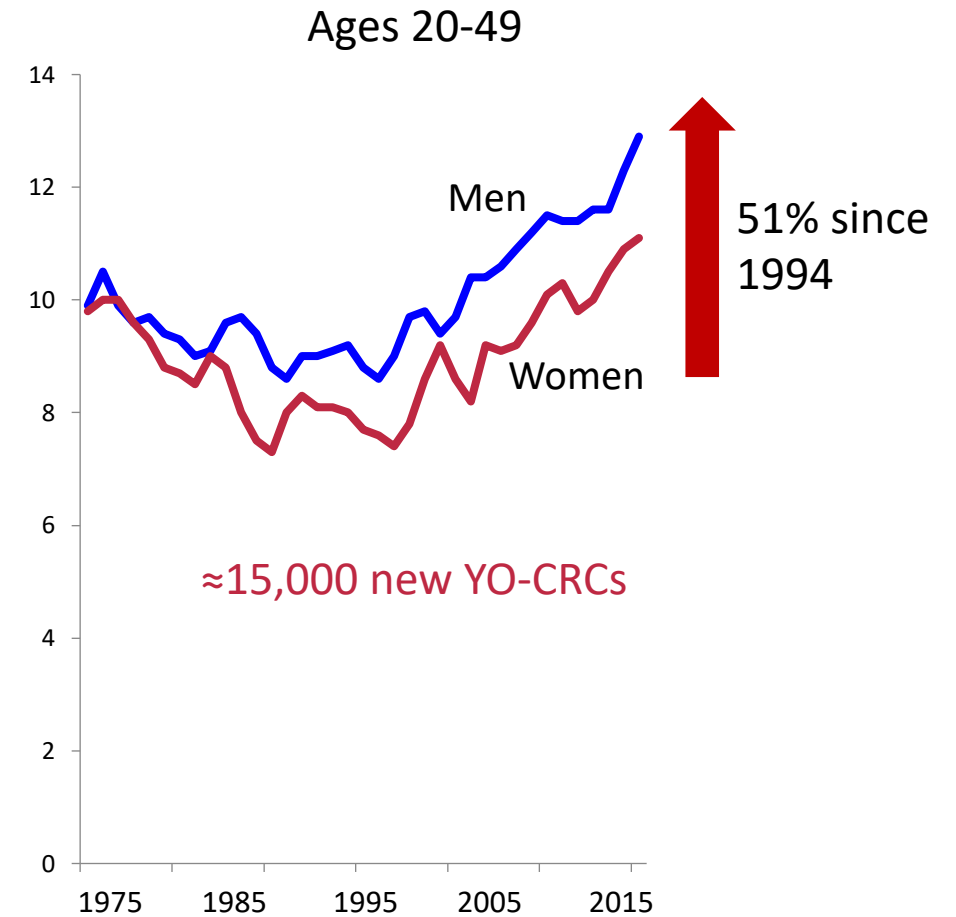
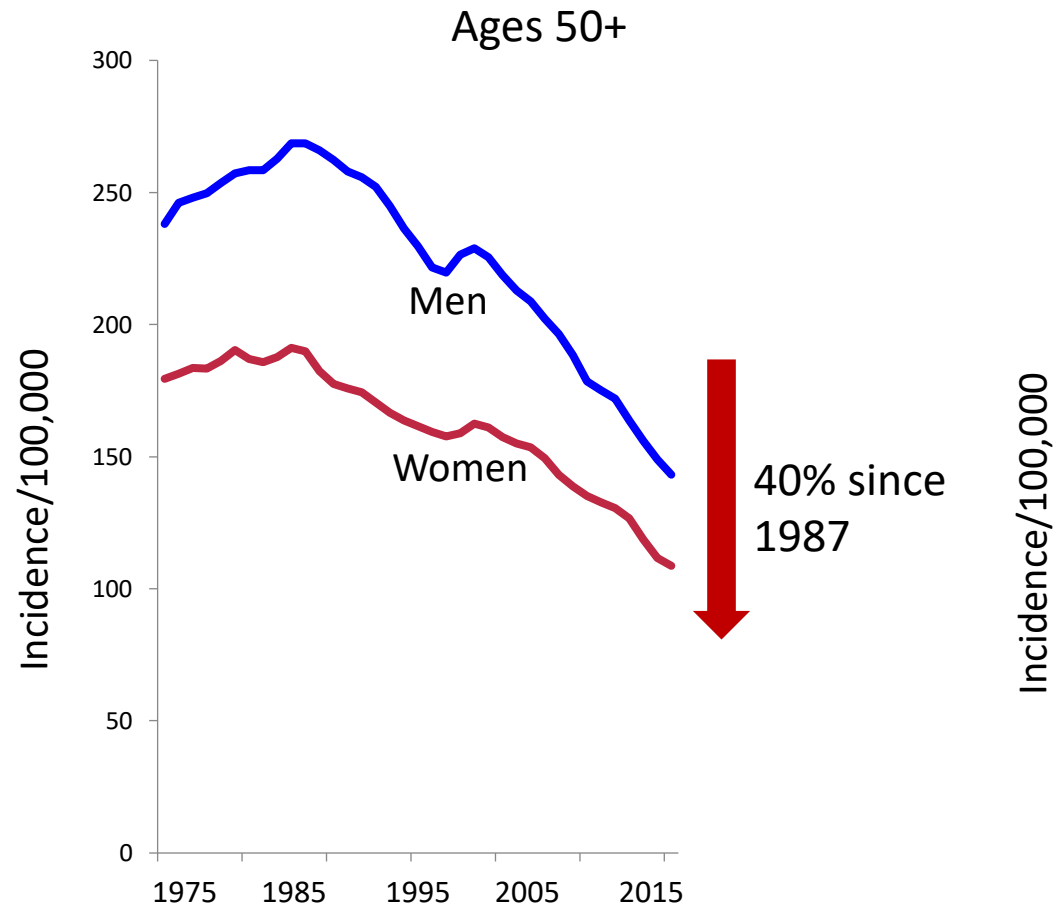


**Colorado**  
**New Cases - 28,600**



# CRC Incidence Over Time

## The Good and Bad



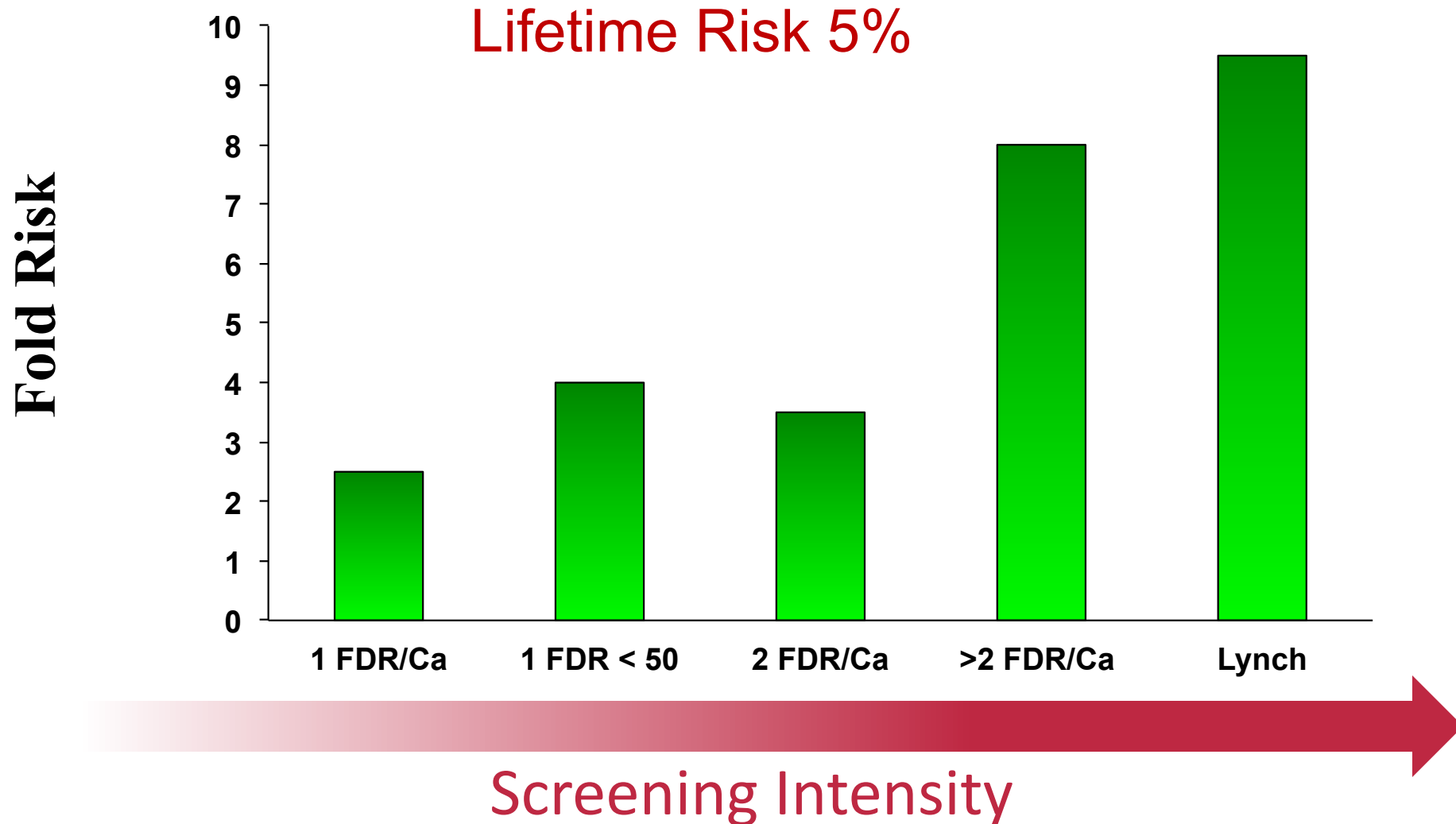


## Demographic:

- Country of origin
- Age
- Sex
- Race/Ethnicity
- Socioeconomic status (SES)
- Family history



# Family History and CRC Risk



## **Demographic:**

- Country of origin
- Age
- Sex
- Race/Ethnicity
- SES
- Family history

## **Lifestyle:**

- Obesity
- Low physical activity
- Smoking
- Alcohol

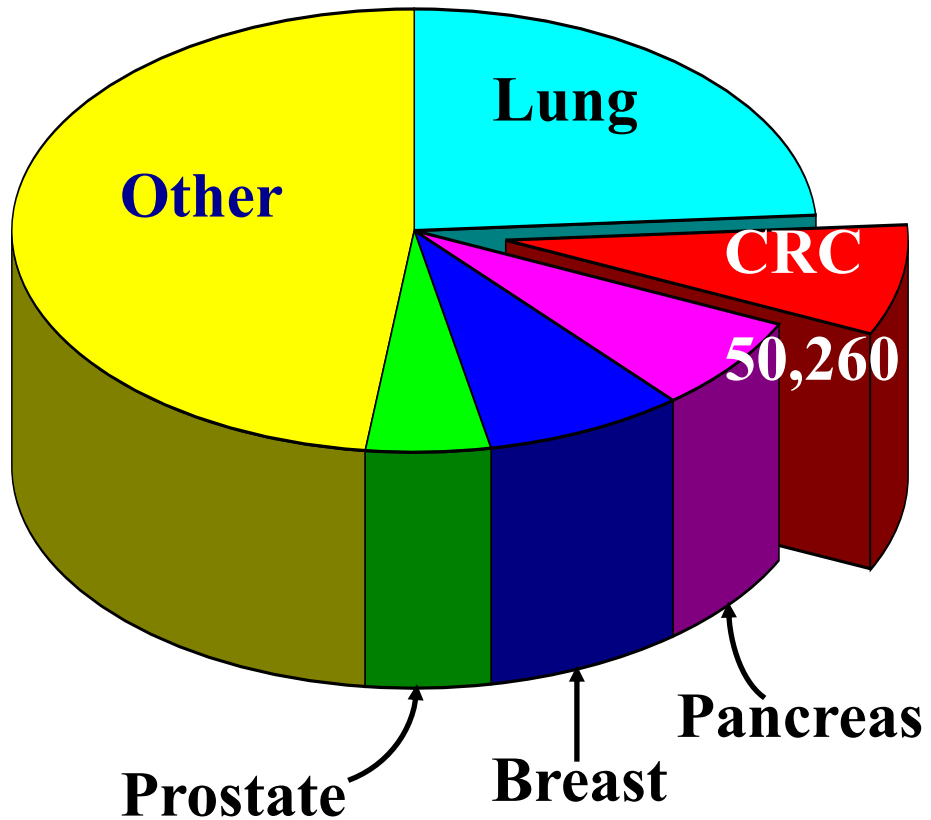
## **Diet:**

- High red/processed meat
- Low fiber containing foods
- Low fruits and vegetables

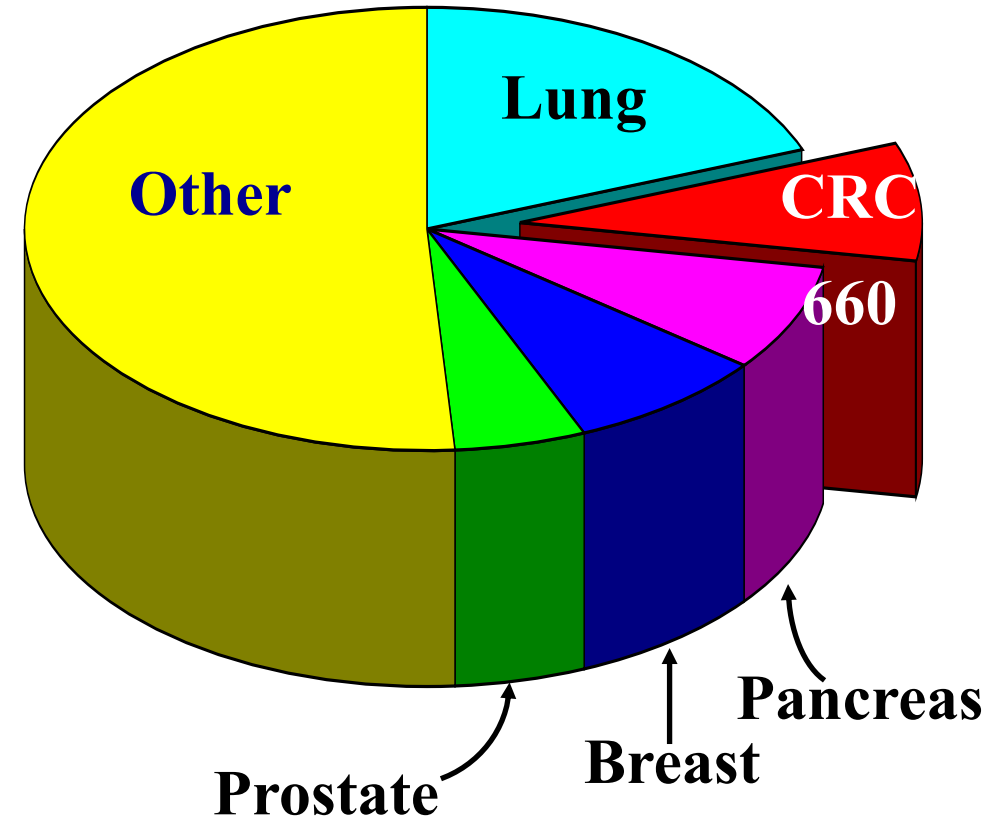
**Failure to Get Screened!**

# CRC is Lethal

**United States  
Deaths- 606,880**

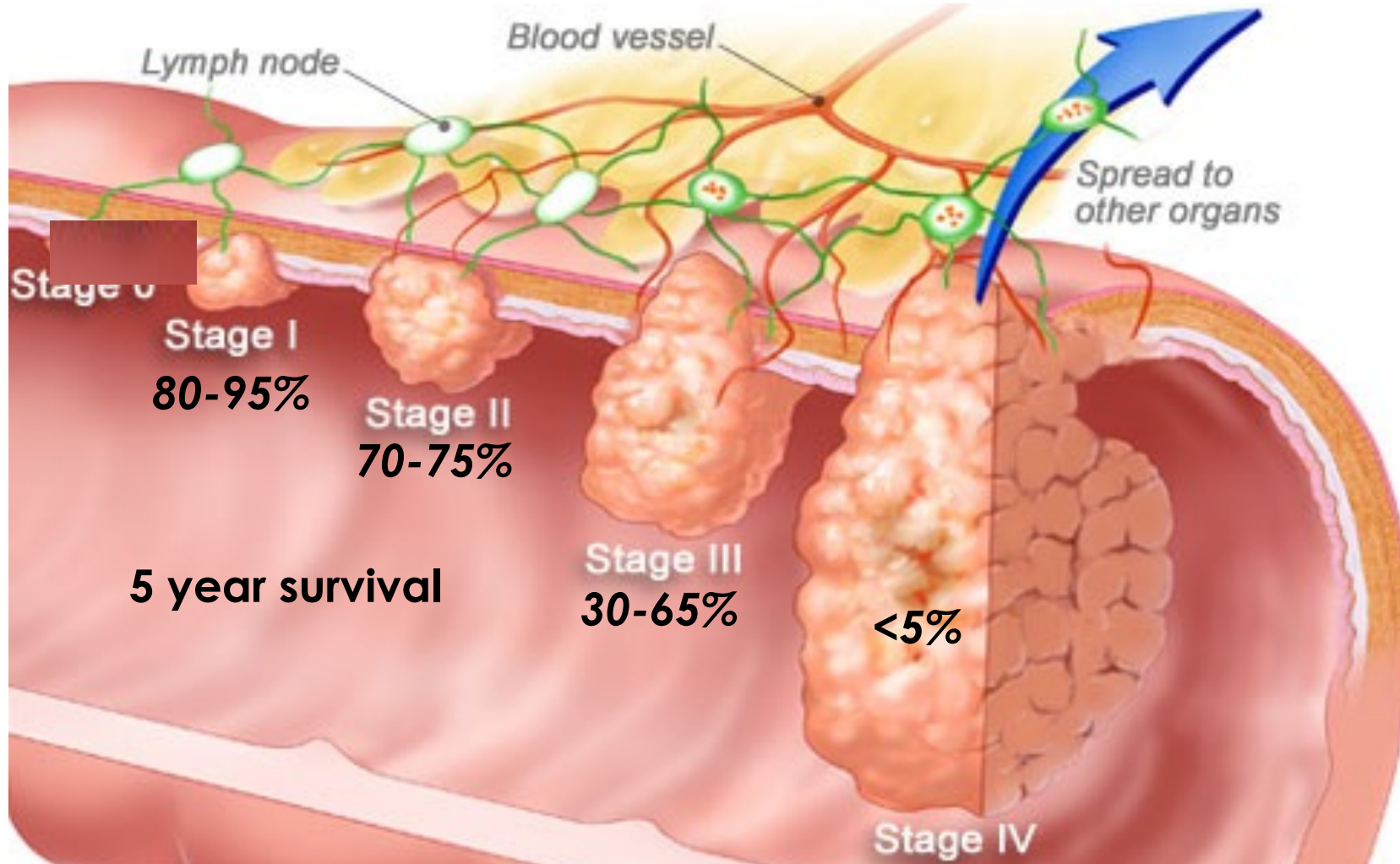


**Colorado  
Deaths- 8,120**





# CRC Staging



**Early Detection is Critical.**

# CRC is Preventable – Modifiable Risk Factors

## Demographic:

- Country of origin
- Age
- Sex
- Race/Ethnicity
- SES
- Family history

## Lifestyle:

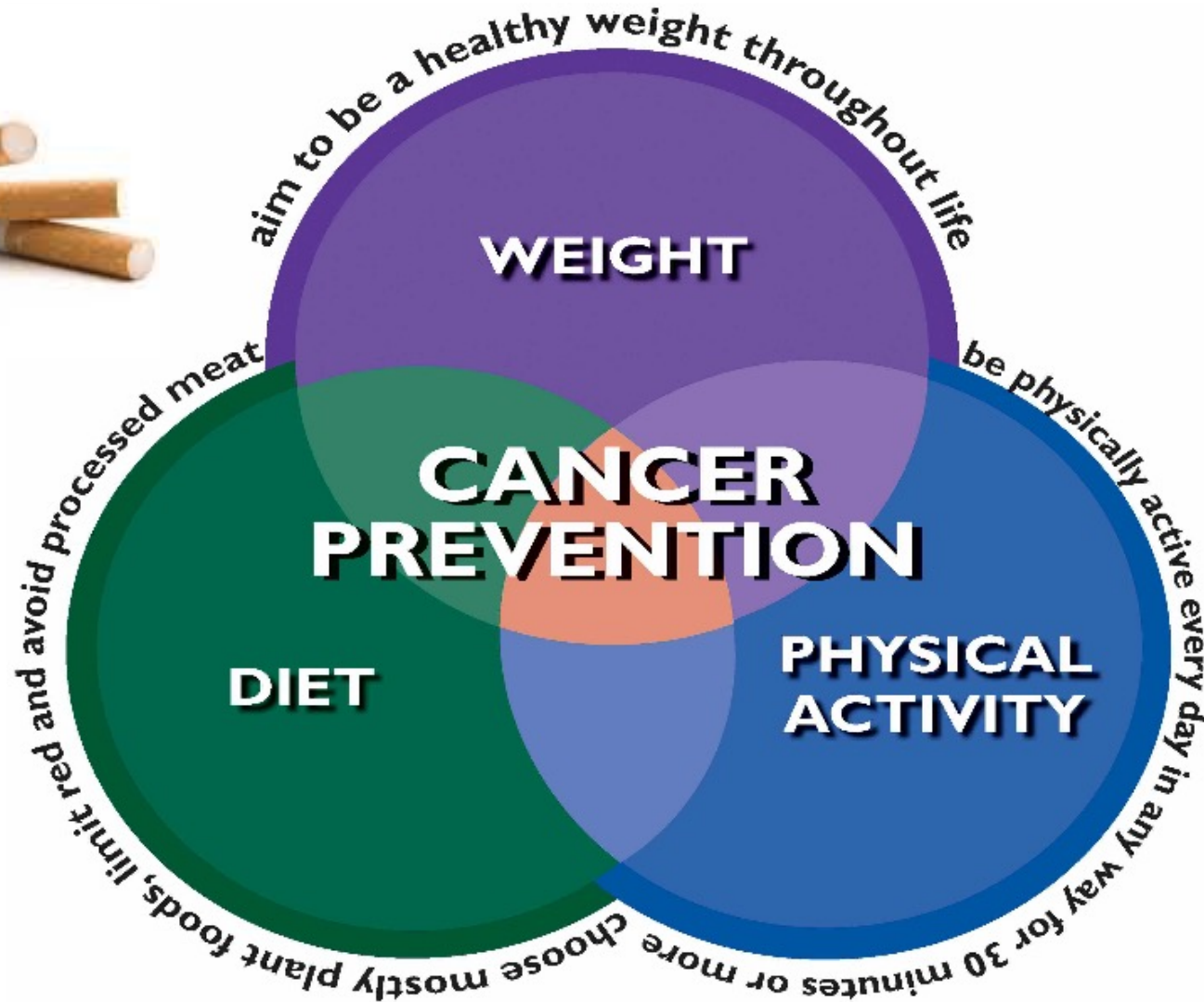
- Obesity
- Low physical activity
- Smoking
- Alcohol

## Diet:

- High red/processed meat
- Low fiber containing foods
- Low fruit and vegetables



# CRC Prevention





## Demographic:

- Country of origin
- Age
- Sex
- Race/Ethnicity
- SES
- Family history

## Lifestyle:

- Obesity
- Low physical activity
- Smoking
- Alcohol

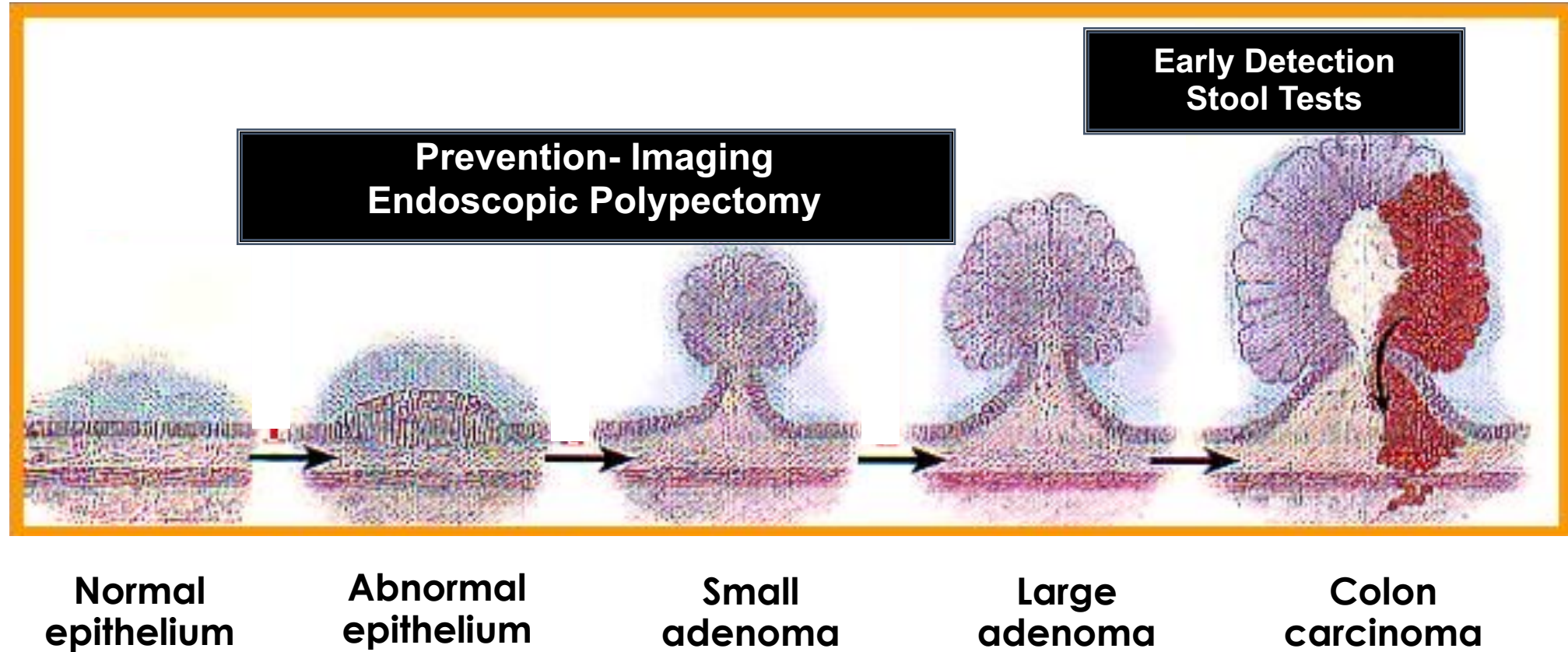
## Diet:

- High red/processed meat
- Low fiber containing foods
- Low fruit and vegetables

## Protective Factors:

- Aspirin for selected groups
- **Screening**

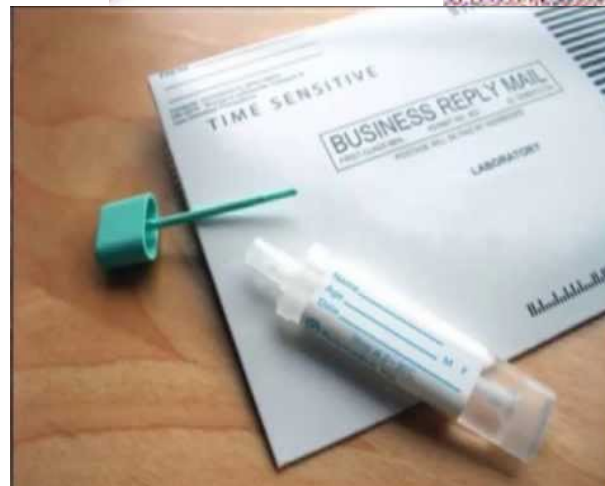
# Screening - Prevention and Early Detection



# The Adenoma Carcinoma Sequence



**Normal  
epithelium**



## Early Detection Stool Tests



## ColoGuard

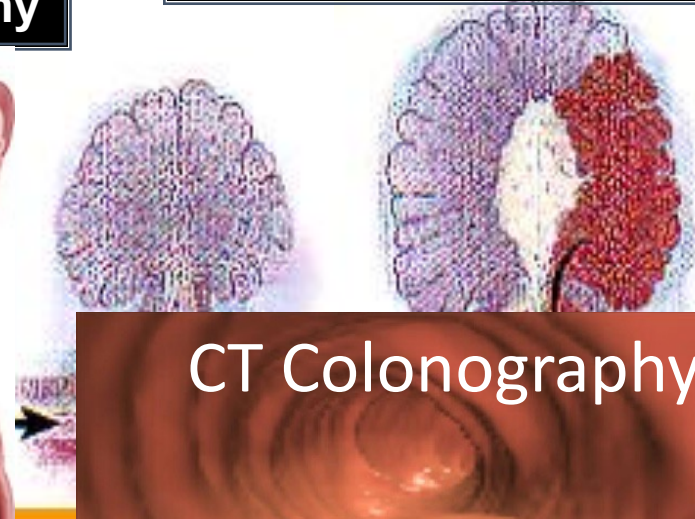
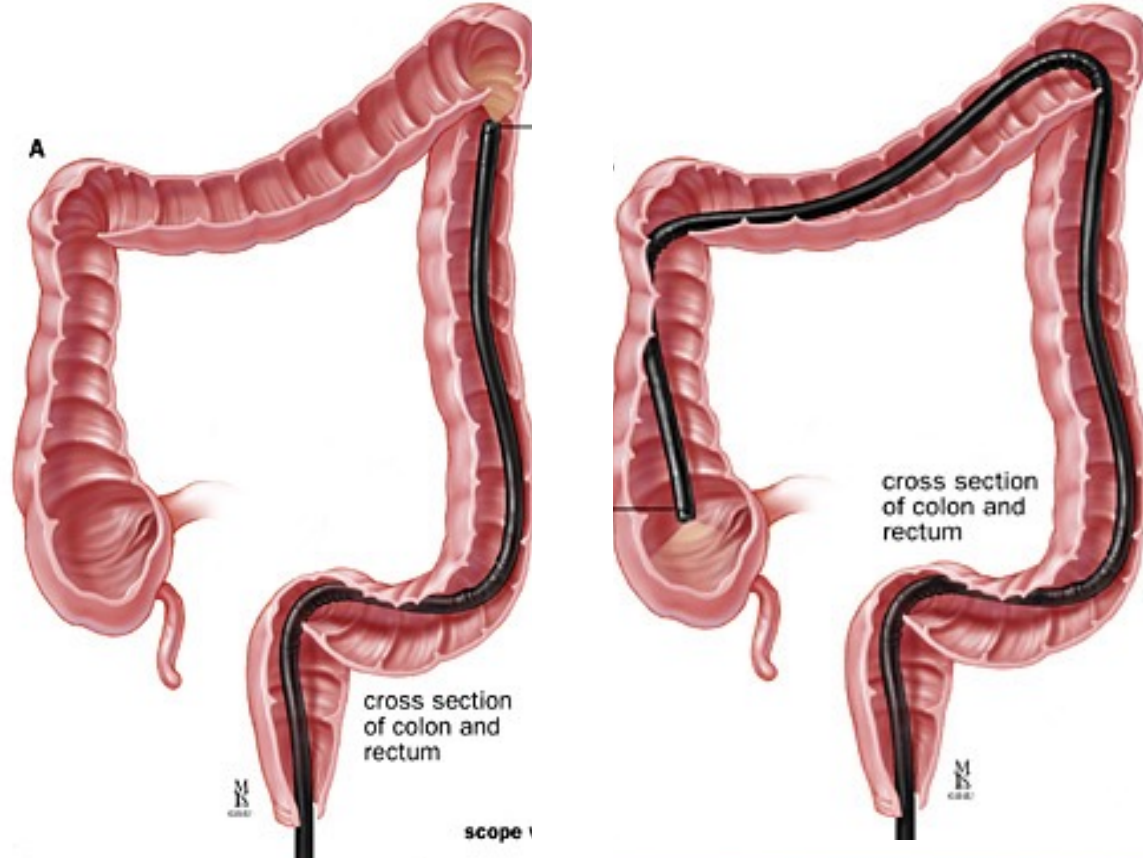




# The Adenoma Carcinoma Sequence

## Prevention- Imaging Endoscopic Polypectomy

## Early Detection Stool Tests



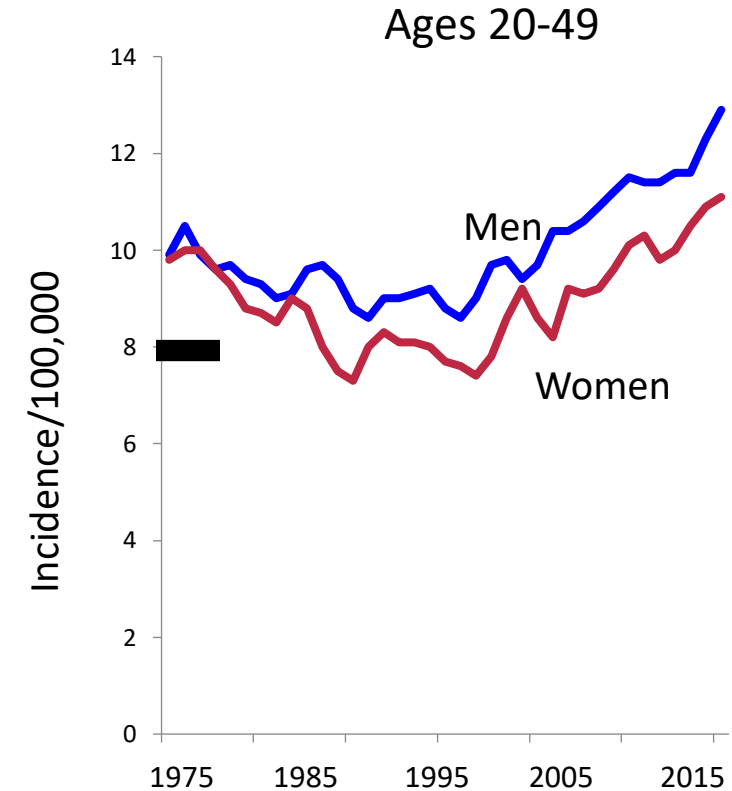
## CT Colonography

## **Average risk:**

- No personal or FH of colonic neoplasia or IBD
- Start CRC screening at age 45, stop at age 75-85
- Options for screening:
  - gFOBT/FIT - annually
  - FIT/DNA - every 3 years
  - Flexible Sigmoidoscopy - every 5 years
  - CT Colonography - every 5 years
  - Colonoscopy - every 10 years
- If done, CRC cases and deaths decrease by 60-80%

# Previous Screening Guidelines

- USPSTF 2016 - “recommends CRC screening starting at age 50 years and continuing until age 75.... multiple screening strategies to choose from” (a recommendation). Individualize screening age 76-85.
- ACS 2017 - Repeated modeling studies using current incidence and mortality rates for the young.
- **Conclusion:** Starting at age 45 led to a 4-8% decrease in number of new CRCs, and an 8 -11% decrease in CRC deaths with a 12-17% increase in the number of colonoscopies needed, compared to starting at age 50.



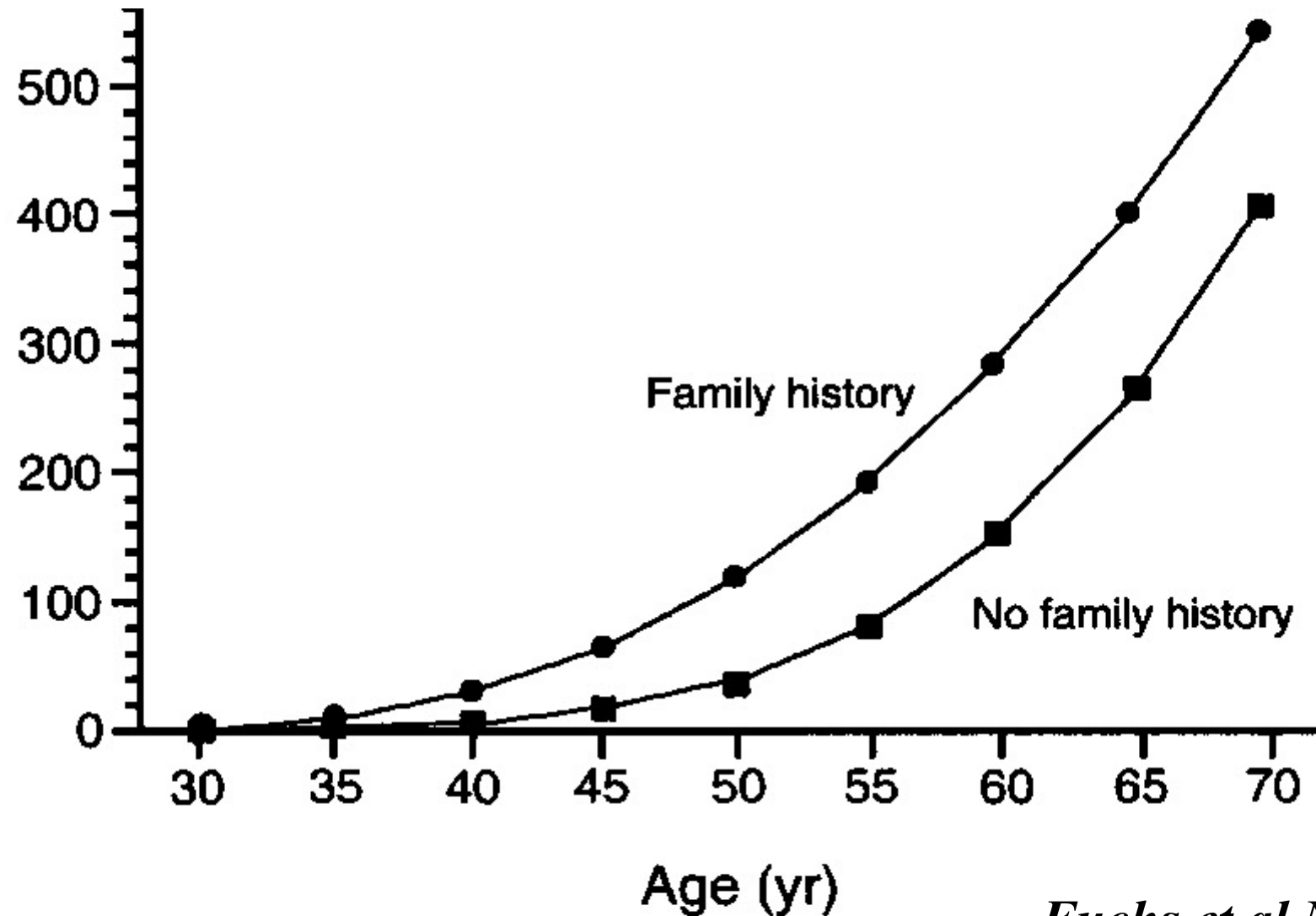


# Current Screening Guidelines

- USPSTF 2021 - “recommends offering CRC screening starting at age **45 years** and continuing until age 75.... multiple screening strategies to choose from” (a recommendation). Individualize screening age 76-85.
- ACS 2018 - “recommends that adults aged **45 years** and older with average risk of colorectal cancer undergo regular screening” and continuing until age 75 with any of multiple screening strategies. Individualize screening age 76-85.
- Colorado HOR passed House Bill 20-1103 in 2020.

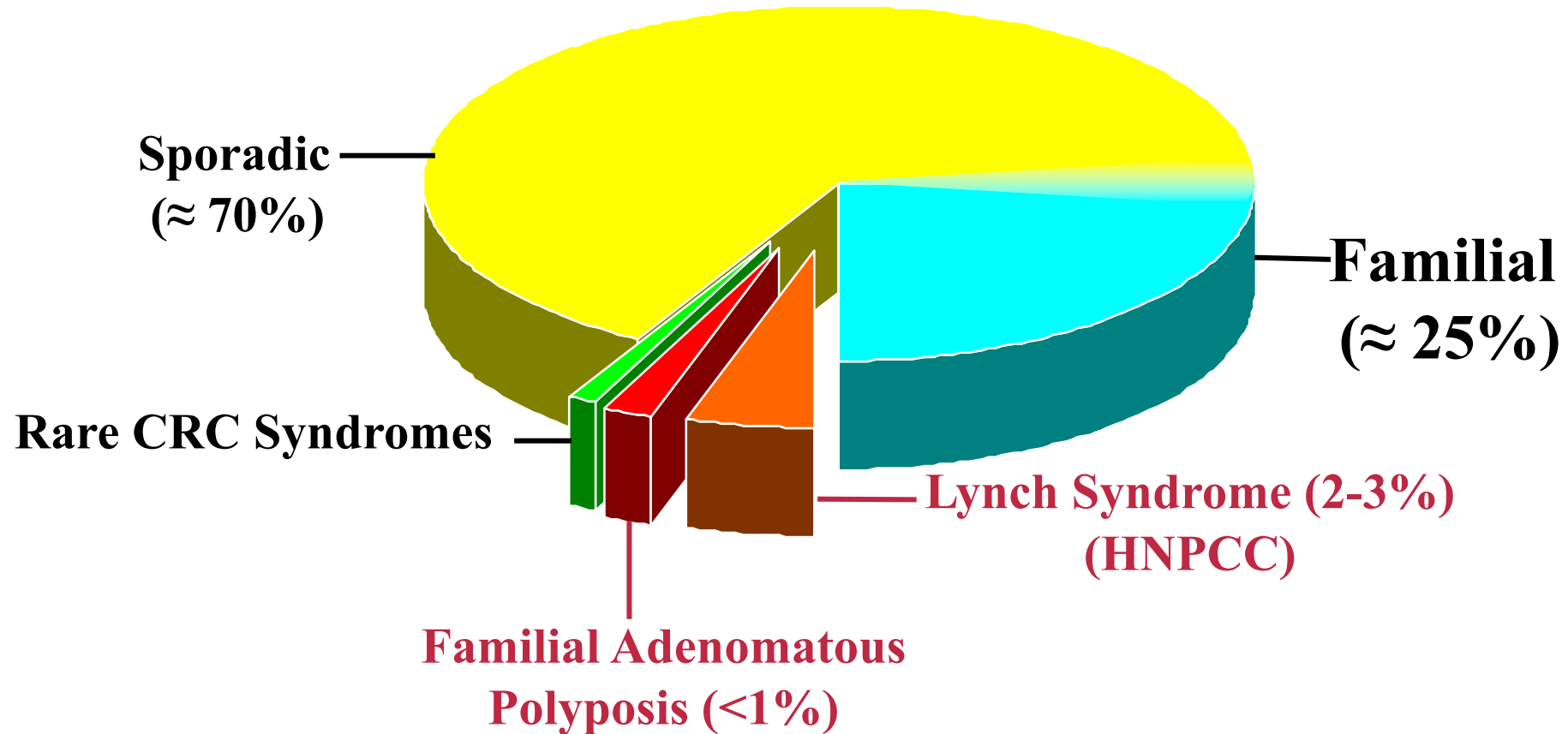
- Increased risk - FDRs of patients with CRC
  - Start at age 40 or earlier depending on # and age of CRCs in family, colonoscopy is preferred
- Hereditary Syndromes
  - Start much earlier (age 12-25), annual colonoscopy

# Family History of CRC Increases Risk Boulder Community Health



*Fuchs et al NEJM 1994*

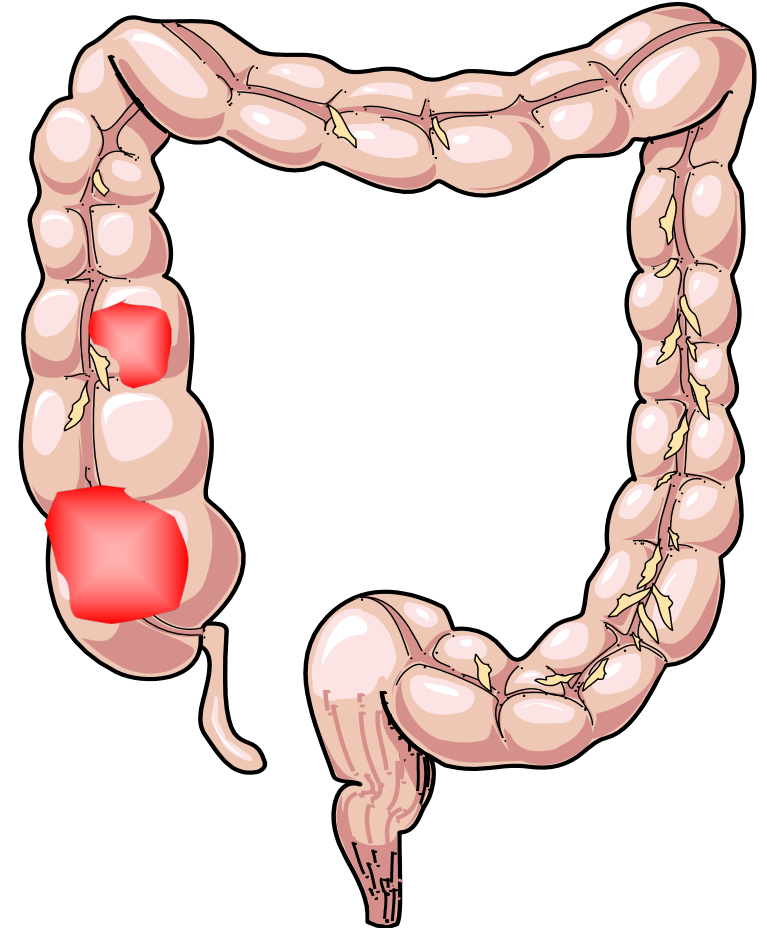
# Familial and Hereditary CRC





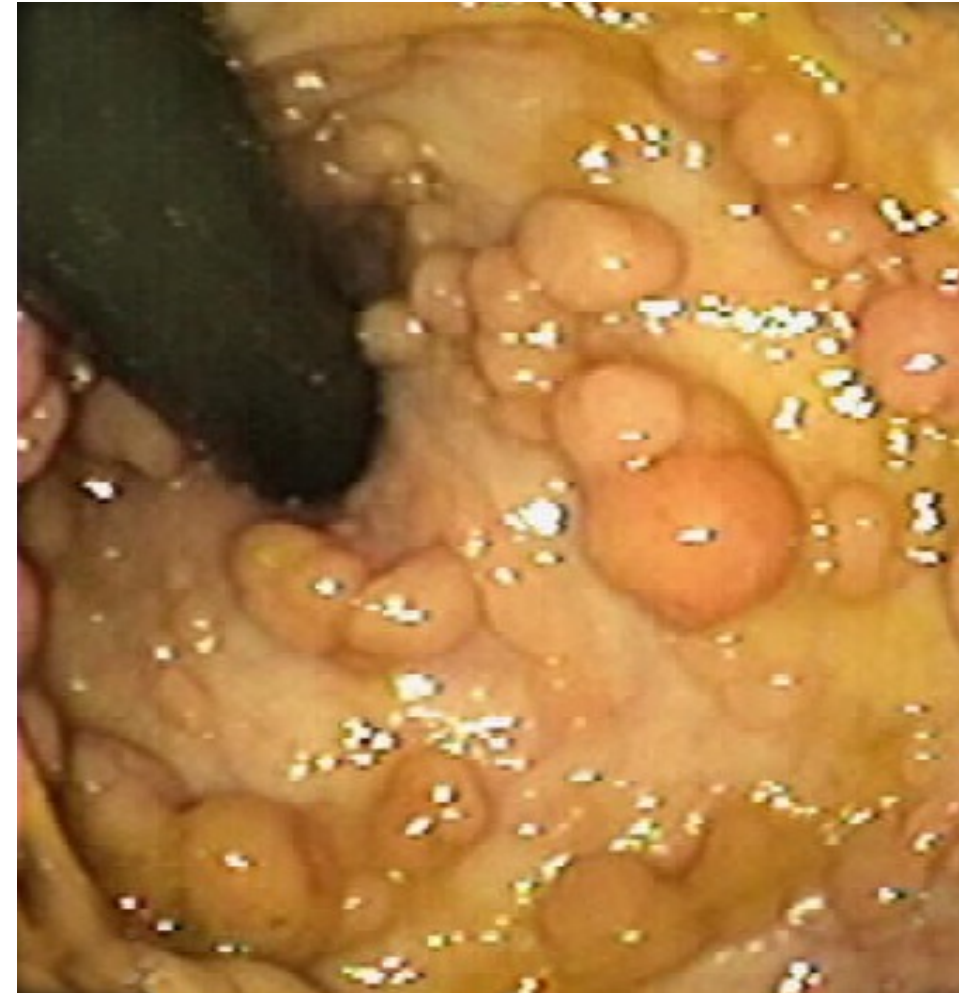
# Lynch Syndrome

- Autosomal Dominant - 3% of CRCs
- High CRC risk - up to 50%
- Early onset - 44 yrs
- Proximal location - 65%
- Other cancers (Uterus, Ovary)
- Under recognized (<5%)
- Genetic testing (MMR genes)
- Screening works
  - Annual colonoscopy age 25 or earlier



# Familial Adenomatous Polyposis

- Rare - 1/7,000 to 1/22,000
- Autosomal Dominant
- High CRC risk  $\approx 100\%$
- Easily recognized
- Genetic testing or screening around age 12
- Surveillance annually



# Colorectal Cancer – The Preventable Killer

- Sequential progression from polyp to cancer
- Common:
  - 4<sup>th</sup> most common cancer in US and CO
  - Decreasing but increasing in the young
- Lethal:
  - 2<sup>nd</sup> most common cause of cancer death in US and CO
  - Strongly dependent on stage at diagnosis
- Preventable:
  - Prudent lifestyle changes
  - Screening is most effective prevention, as well as early detection strategy
- Familial and hereditary CRC require special attention

# Thank You!

## Questions?





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