

# Management and Treatment of Early Onset Colorectal Cancer (EOCRC)

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# Clinical Presentation of EOCRC

## Common Symptoms

- Rectal bleeding
- Abdominal pain
- Unexplained weight loss
- Change in bowel habits

## Diagnostic Challenges

- Symptoms dismissed as hemorrhoids
- Low index of suspicion
- Delayed referrals

## Red Flags

- Persistent symptoms
- Family history
- Iron deficiency anemia



# Diagnostic Approaches



## Initial Assessment

Thorough history and physical exam



## Laboratory Studies

CBC, iron studies, tumor markers



## Colonoscopy

Gold standard for diagnosis

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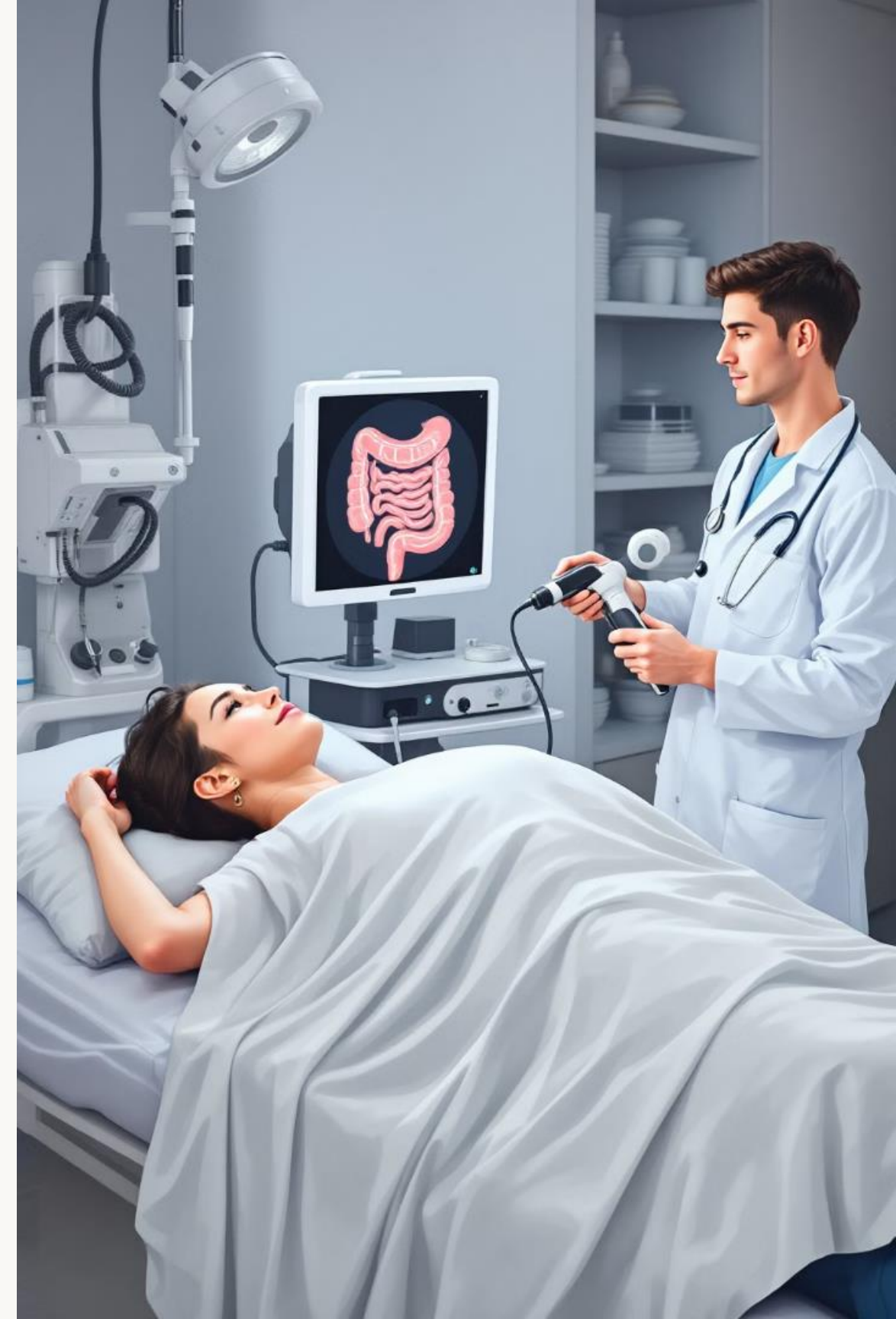
## Genetic Testing

For hereditary syndromes

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## Imaging

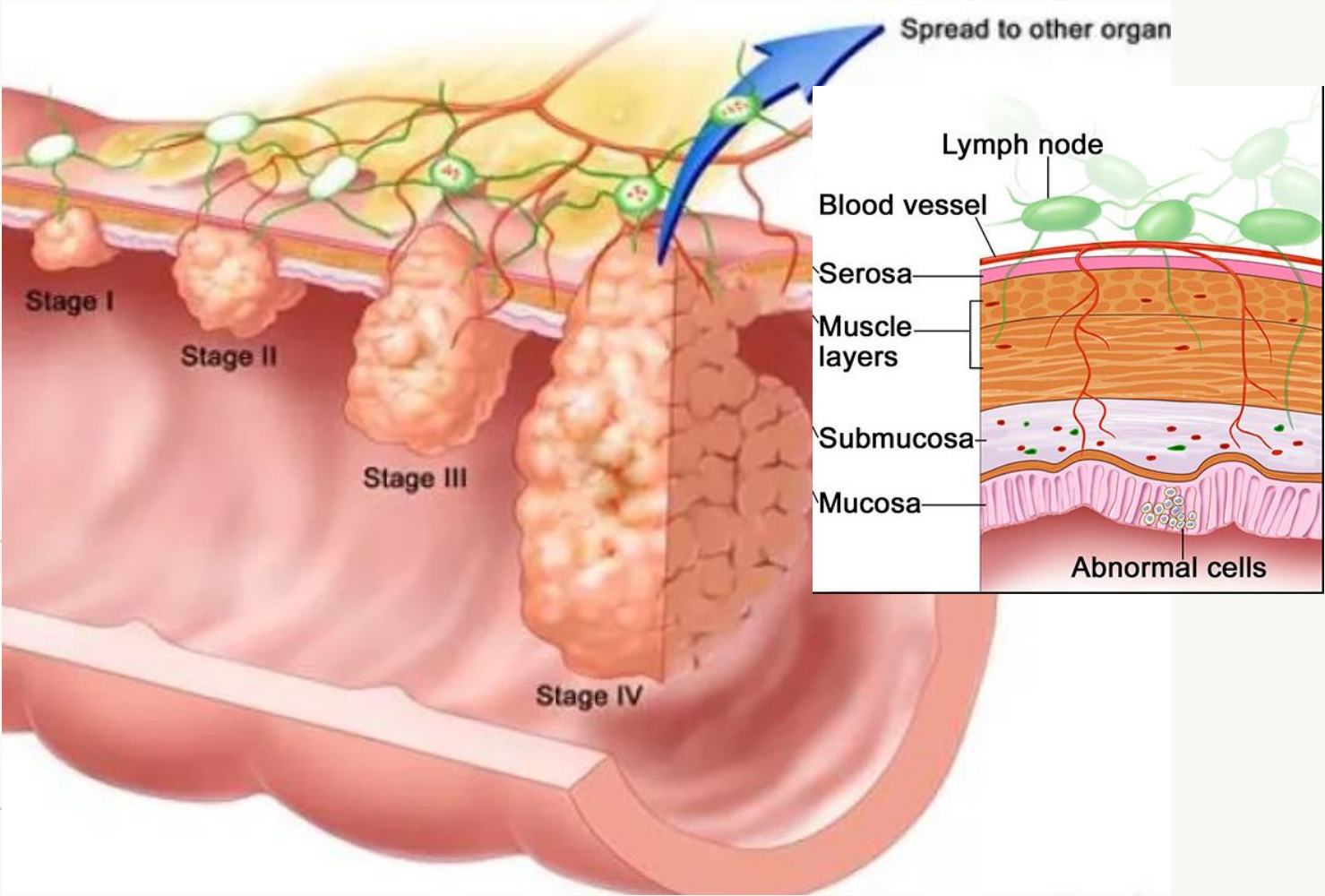
To evaluate for extent of disease





# Staging and Prognosis

1	Stage I Confined to colon wall
2	Stage II Extends through colon wall
3	Stage III Lymph node involvement
4	Stage IV Distant metastases



# UCSD Multidisciplinary Approach

GI Medical Oncologist  
Medical treatment coordination &  
Systemic Therapies

Support Services  
Psychosocial, palliative, ostomy &  
nutritional support

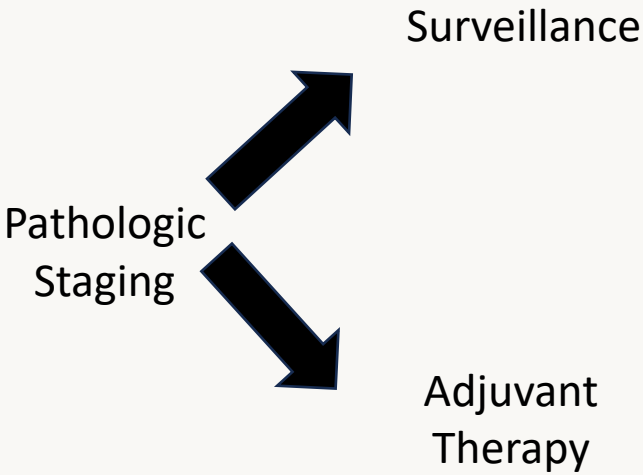
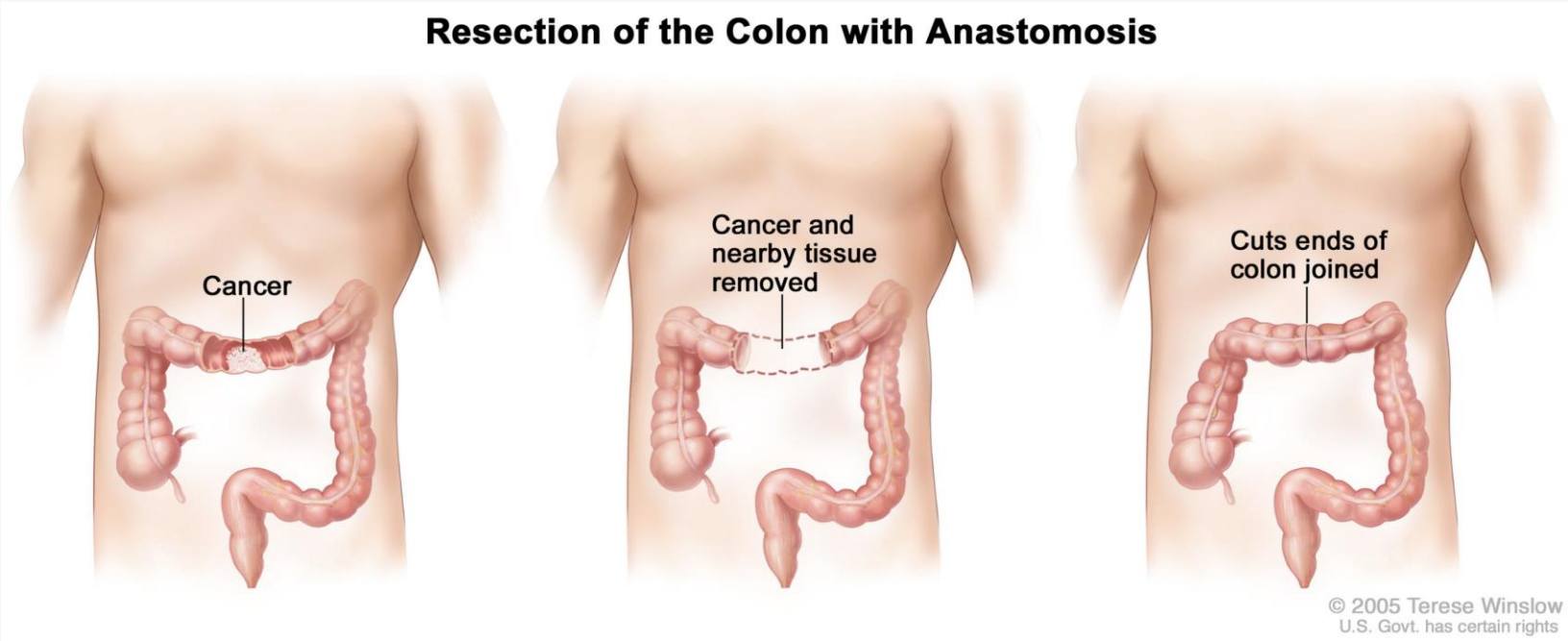


Colorectal Surgeon  
Surgical planning and execution

Radiation Oncologist  
Radiation treatment planning

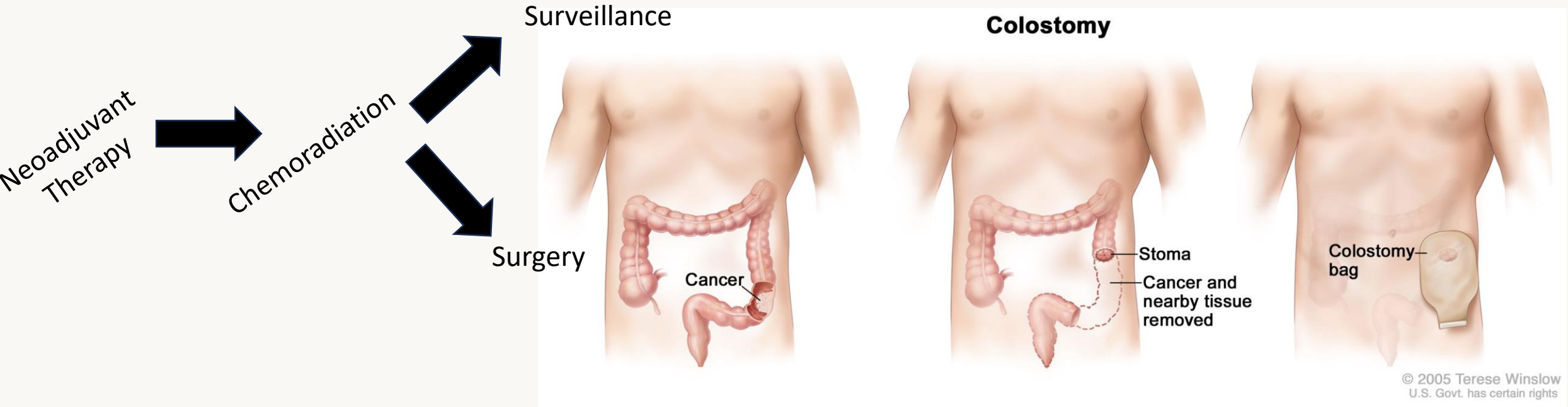
Colon Cancer

Diagnosis  
No Distant Disease



Rectal Cancer

Diagnosis  
No Distant Disease





# Surgical Management



## Open or Laparoscopic Surgery

Traditional or minimally invasive approaches for complex cases



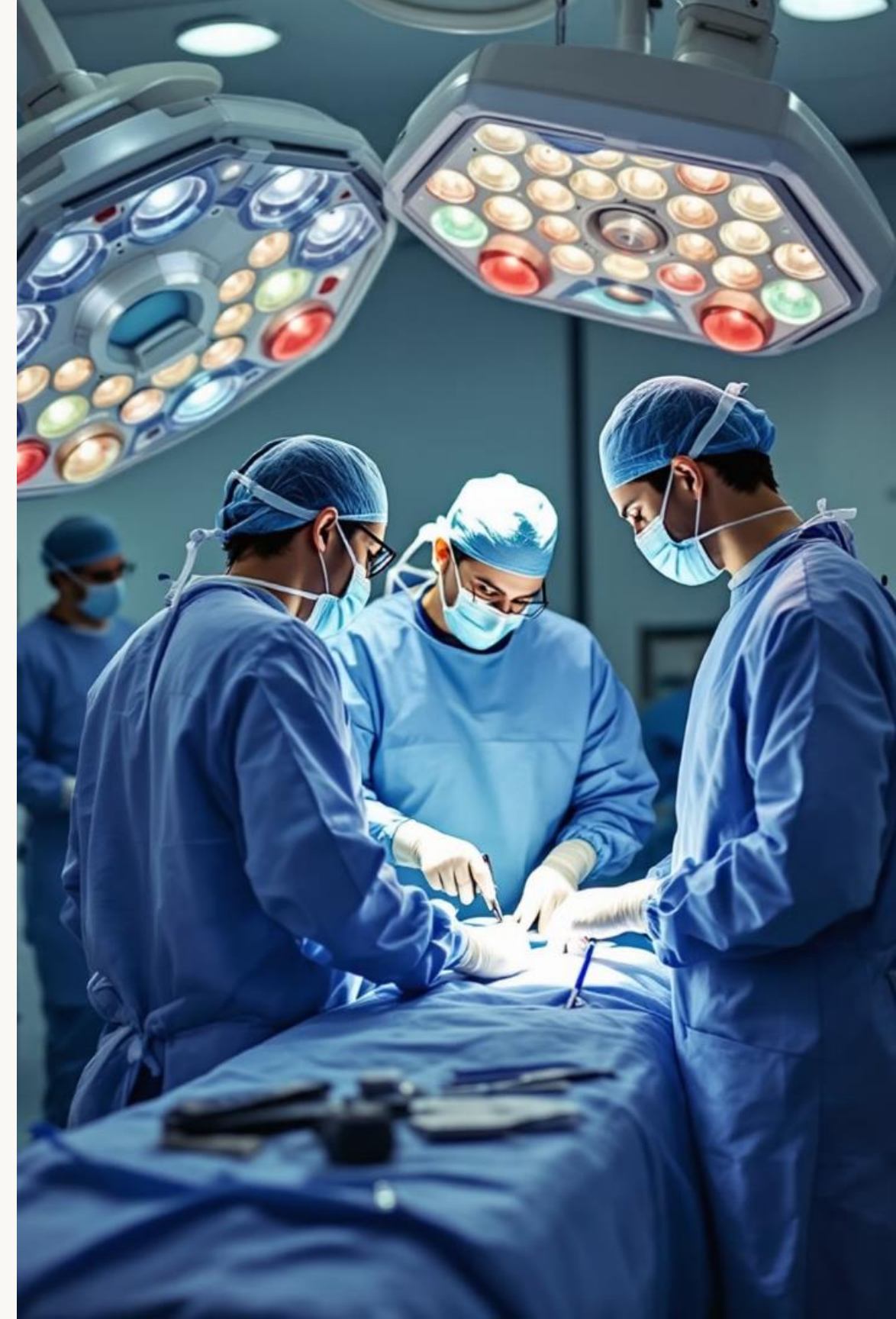
## Oligometastatic Surgery

Possible curative option even for Stage IV patients



## Robotic

Precise technique for rectal tumors to attempt ostomy avoidance



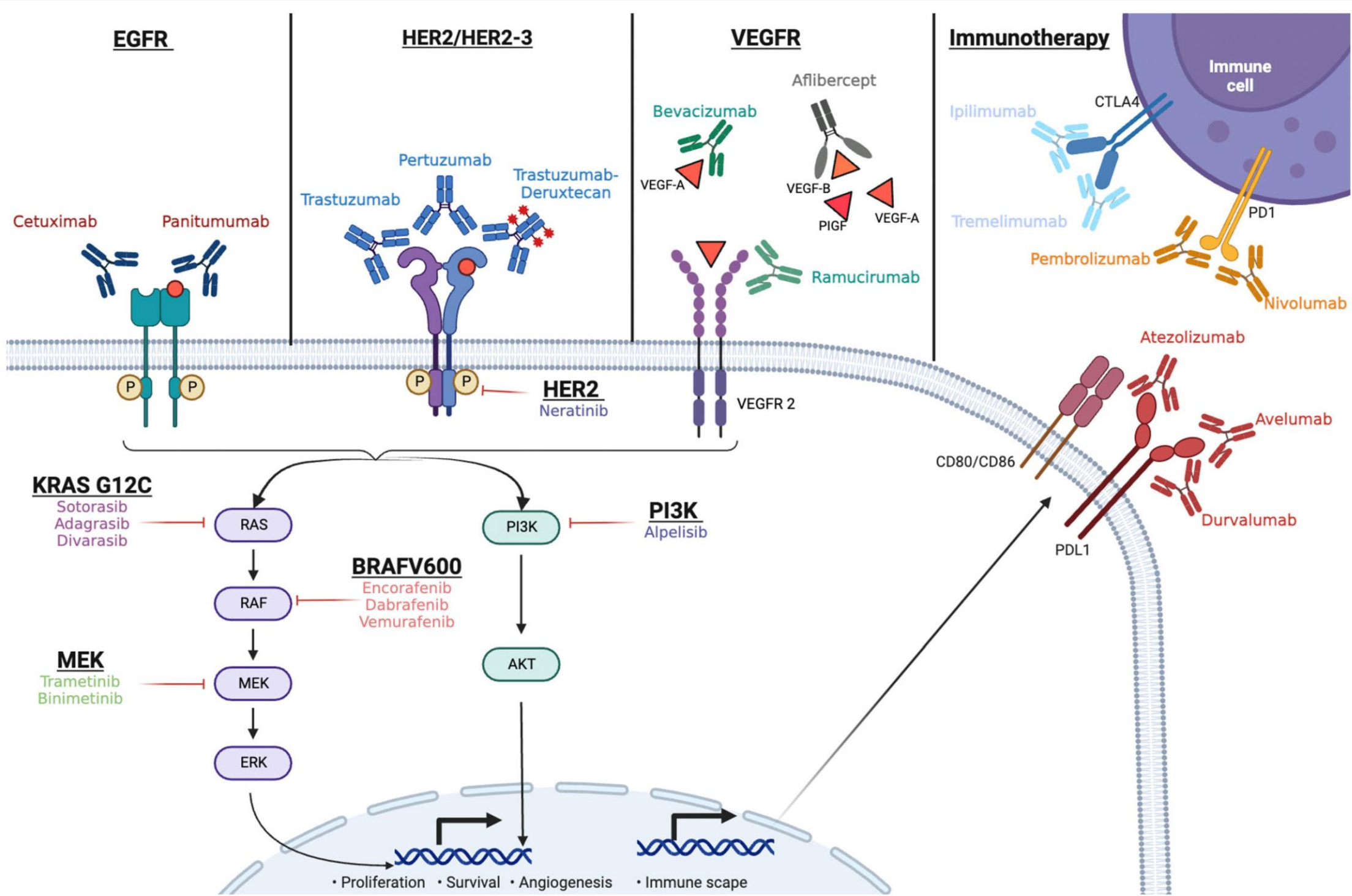


# Chemotherapy in EOCRC

Regimen	Components	Common Use
FOLFOX	5-FU, leucovorin, oxaliplatin	Stage III-IV
FOLFIRI	5-FU, leucovorin, irinotecan	Stage IV
CAPEOX	Capecitabine, oxaliplatin	Stage III
FOLFOXIRI	5-FU, leucovorin, oxaliplatin, irinotecan	Stage IV



# FDA Approved Targeted Therapies



# Immunotherapy in EOCRC



## Checkpoint Inhibitors

Pembrolizumab, nivolumab, dostarlimab for MSI-H tumors



## Biomarker Testing

MSI/MMR, TMB, PD-L1 status essential for selection



## Clinical Trials

Combination strategies under investigation

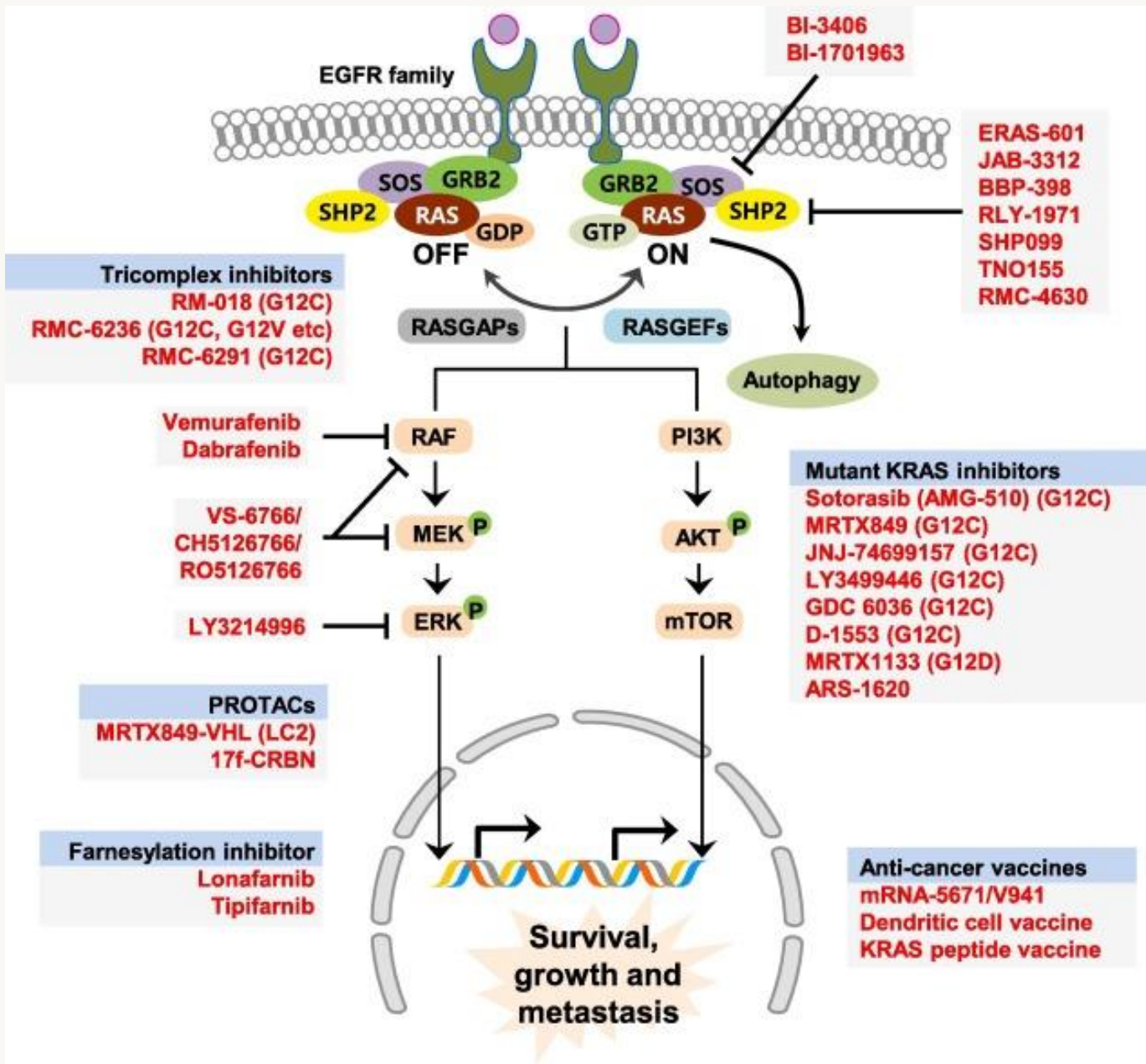
- Chemo + Immunotherapy Adjuvant & Metastatic
- Immunotherapy Neoadjuvant



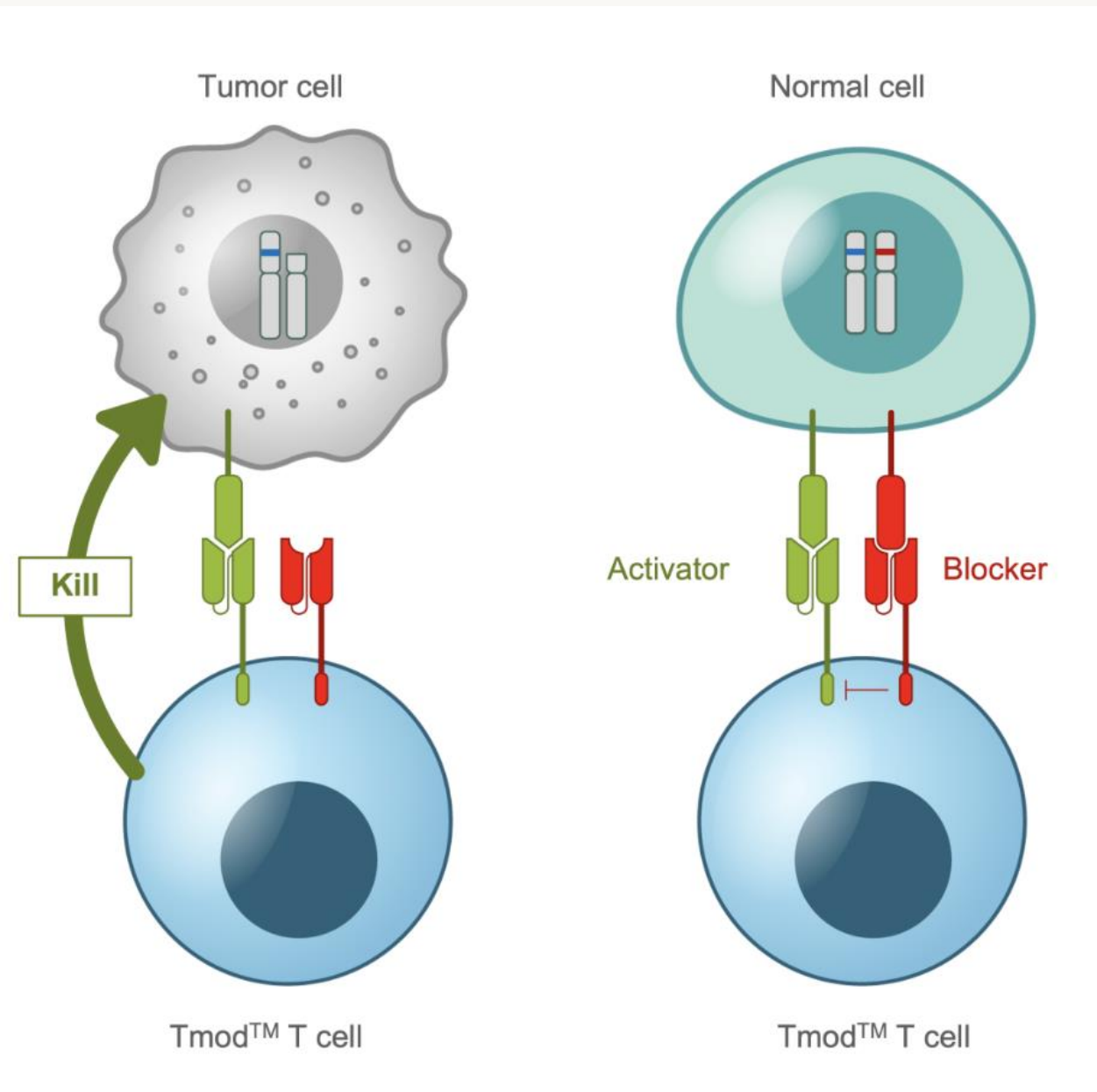


# Emerging Therapies and Clinical Trials

## RAS and MAPK Pathway Inhibition



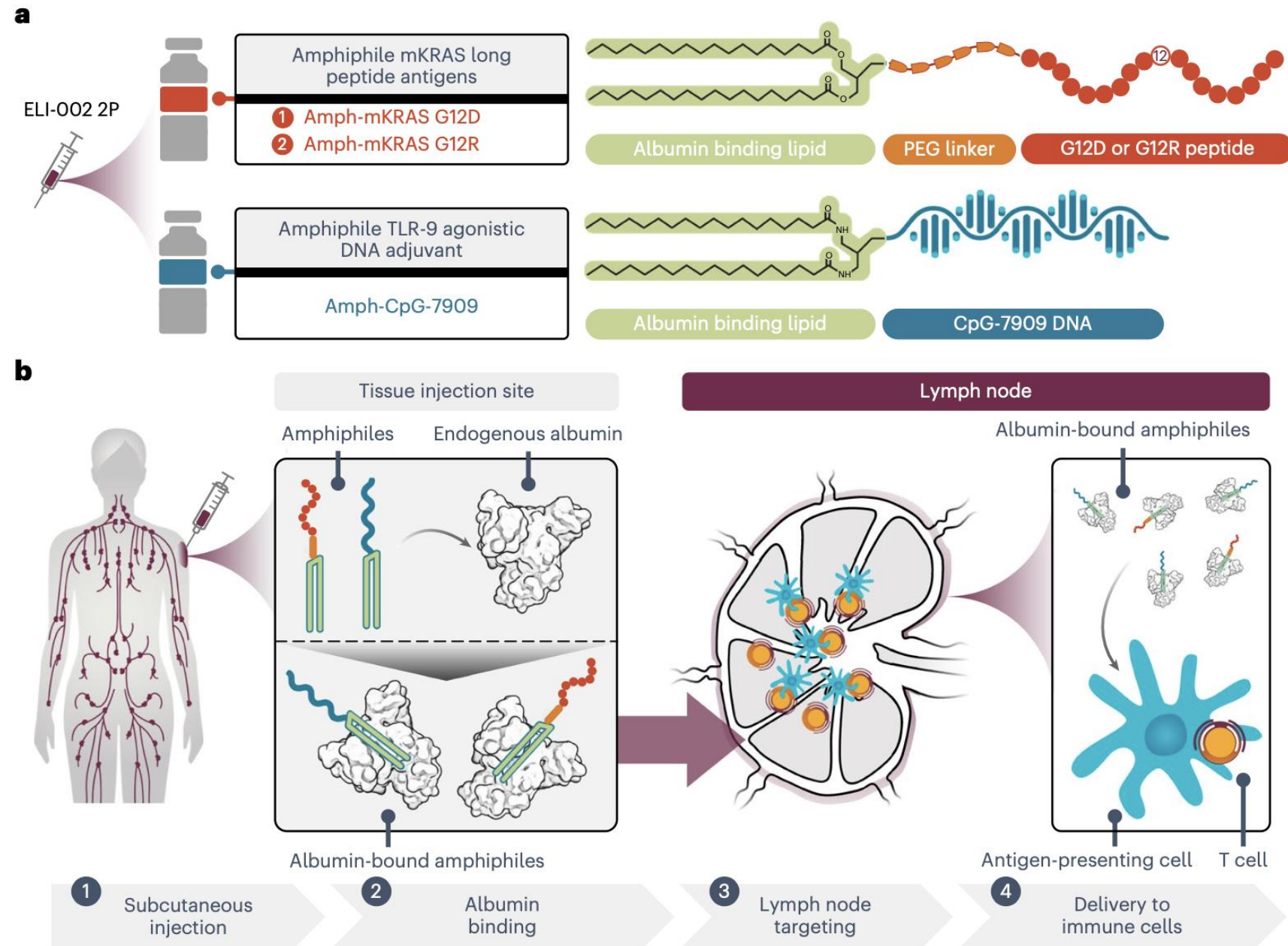
## Cellular Therapy





# Emerging Therapies and Clinical Trials

## Anti-Tumor Vaccines



# Future Directions in EOCRC Management

1

## Molecular Profiling

Tailored treatments based on tumor genetics

- WGS, WES, Panels



## Liquid Biopsies

Early detection from blood samples

- tissue agnostic ctDNA
- tumor informed ctDNA



## Microbiome Research

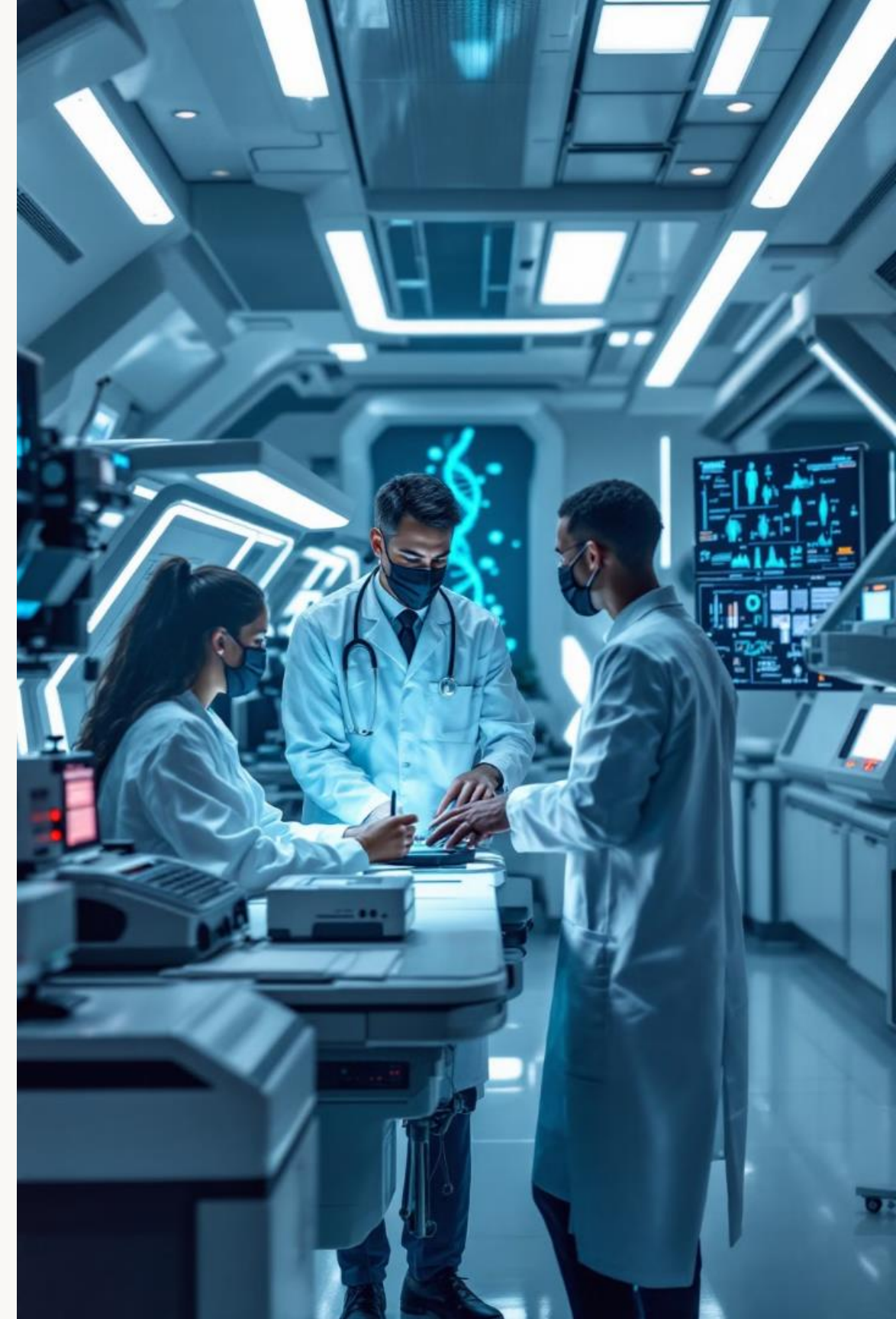
Gut bacteria influence on cancer risk



## AI Applications

Machine learning for treatment optimization

- which chemotherapy backbone may work the best/worst
- Combinations of targeted drugs





# Radiation Therapy

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Short-course

Days of radiation for select rectal cancers

28

Long-course

Days with concurrent chemotherapy (capecitabine or 5-fluorouracil)

4-8

Response Time

Weeks to assess tumor response

MRI

Restaging

Assess Tumor Response to Radiation





# Fertility Considerations

## Pre-treatment Discussion

Fertility risks and preservation options

## Fertility Preservation

Sperm banking, egg/embryo freezing

## Treatment Planning

Minimizing gonadal exposure

## Post-treatment Options

Assisted reproduction, surrogacy, adoption



# Psychosocial Support



Addressing the unique emotional, family, financial, and career challenges faced by young cancer patients.



# Survivorship and Follow-up



## Surveillance Protocol

Regular colonoscopies, imaging, labs



## Late Effects Management

Addressing long-term complications  
(neuropathy, alopecia, loss of work,  
intimacy)



## Health Promotion

Nutrition, exercise, preventive care





# Prevention Strategies



## Early Screening

Now recommended from age 45



## Physical Activity

150+ minutes weekly exercise



## Follow Up Colonoscopies

Evaluate new polyps and pre-cancers



## Diet Modification

Reduce red meat, increase fiber



## Avoid Tobacco

Quit smoking, limit alcohol



## Follow Up Imaging and Bloodwork

Reduce Local and Metastatic Recurrence



# Conclusion

## Key Takeaways

- EOCRC requires high index of suspicion
- Multidisciplinary care essential
- Special considerations for young patients

## Urgent Needs

- Increased awareness
- Expanded research funding
- Early detection strategies

## Future Focus

- Personalized treatment approaches
- Improved quality of life
- Prevention strategies

Thank you! Questions? [gbotta@ucsd.edu](mailto:gbotta@ucsd.edu)