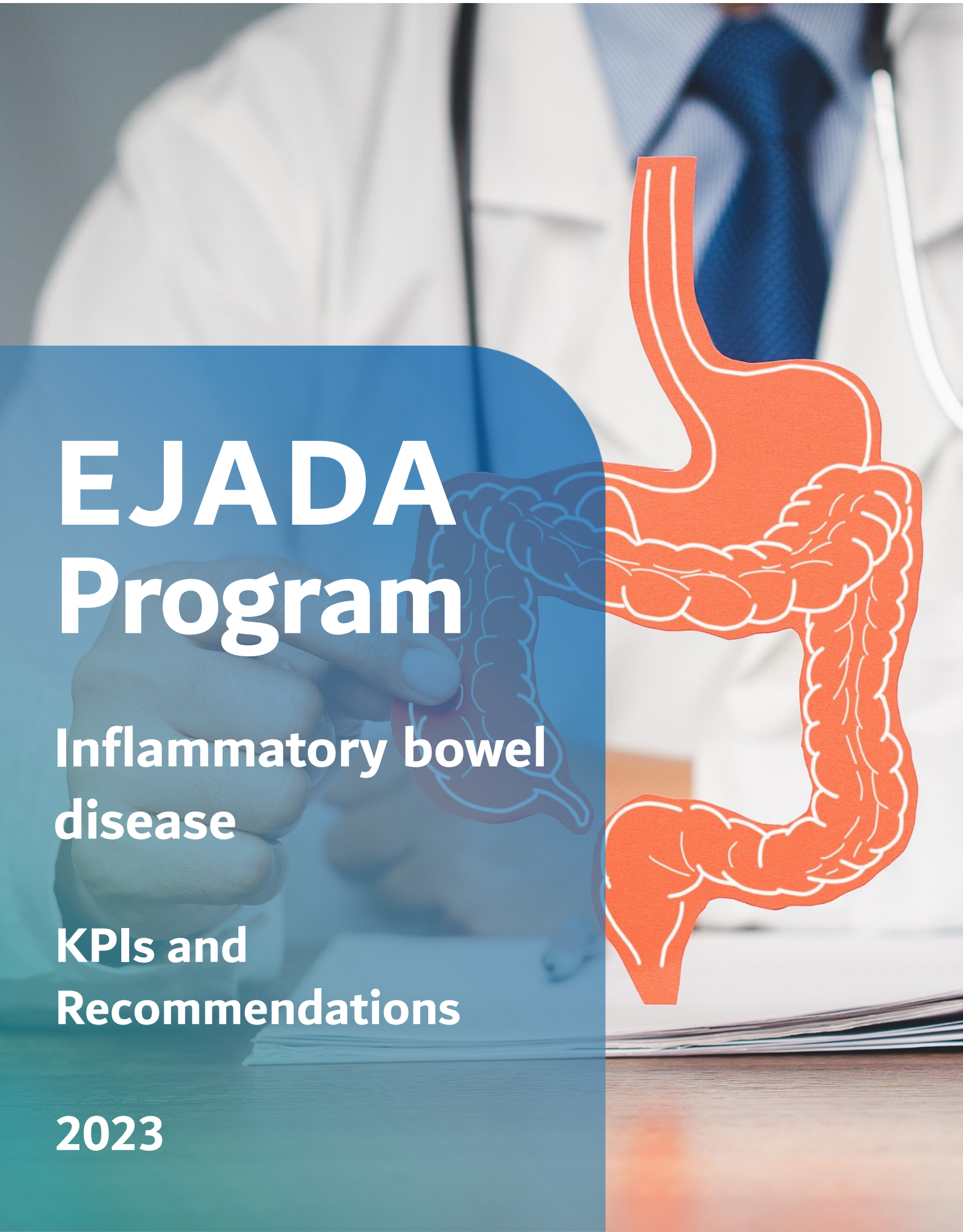
هيئة الصحة بدبي
DUBAI HEALTH AUTHORITY

إجادة
EJADA



EJADA Program

Inflammatory bowel disease

KPIs and Recommendations

2023

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Introduction

Inflammatory bowel disease (IBD) is a gastrointestinal condition which is characterized by chronic relapsing intestinal inflammation. Although the etiology of IBD remains largely unknown, it involves a complex interaction between the genetic, environmental or microbial factors and the immune responses. The two main types of IBD are ulcerative colitis and Crohn's disease. Ulcerative Colitis (UC) is characterized by inflammation and ulcers that form on the inner lining of the colon and rectum. Symptoms of UC can include diarrhea, abdominal pain, rectal bleeding, and a strong and sudden urge to have a bowel movement. UC tends to affect only the innermost lining of the colon, resulting in continuous inflammation. Treatment for UC include pharmacological interventions to control inflammation, lifestyle modifications, and in severe cases, surgery to remove the affected colon. Crohn's Disease (CD) is another type of IBD that can affect any part of the digestive tract. It is characterized by inflammation that can extend through the entire thickness of the bowel wall. Symptoms of CD can include abdominal pain, diarrhea, weight loss, fatigue, and complications such as fistulas and strictures.

Diagnosis of IBD includes colonoscopy and histological examination along with laboratory tests for differential diagnosis (complete blood count, c-reactive protein, albumin test, bacteriological/parasitological examination of stool, fecal calprotectin).Treatment for patients with IBD are mainly tailored to their specific symptoms and the severity of the disease. Managing IBD often involves a multidisciplinary approach, including gastroenterologists, dietitians, and other healthcare professionals. In general, the corticosteroids, aminosalicylates, antibiotics, supportive medications and immunosuppressive drugs are used to treat IBD. For mild to moderate UC, aminosalicylates are used. For moderate to severe UC, mainly corticosteroids are used for symptomatic relief. Some antibiotics such as amoxicillin, ciprofloxacin, metronidazole, and azithromycin can also improve the symptoms. However, surgical treatment is preferred in patients with UC which are not responsive to these drugs. For CD, sulfasalazine, which contains 5-aminosalicylate (5-ASA) have shown to improve the clinical symptoms of patients with mild to moderate CD. Mesalamine is a nonsteroidal anti-inflammatory drug which has been used for treatment of IBD and is safe and tolerable as compared to other pharmacological agents. New innovative therapies biologics and JAK inhibitors are changing the management schema of IBD.

The major unmet needs for IBD include better risk stratification and choosing the best therapy for the individual patient. Treatment of special population and elderly is also another unmet need of IBD which needs special attention, especially in terms of non-invasive methods of diagnosis and measuring efficacy and safety of aforementioned therapies in these populations.

Scope

The Ejada KPIs are quality indicators and ratings for physicians, facilities and insurance companies based on information collected by DHA systems from providers, payers and patients.

The inflammatory bowel disease (IBD) KPIs and recommendations are based on international guidelines. The KPIs are designed for healthcare practitioners and providers to follow international best practices in the management of Inflammatory bowel disease patients.

The inflammatory bowel disease KPIs cover the following aspects of inflammatory bowel disease management:

- Laboratory, pathological and imaging for the diagnosis of IBD
- Pharmacological management of CD and UC based on severity
- Surgical management of UC and CD
- Hospitalization and referrals required for IBD patients

The KPIs and recommendations have been reviewed by leading experts in the country.

List of Abbreviations

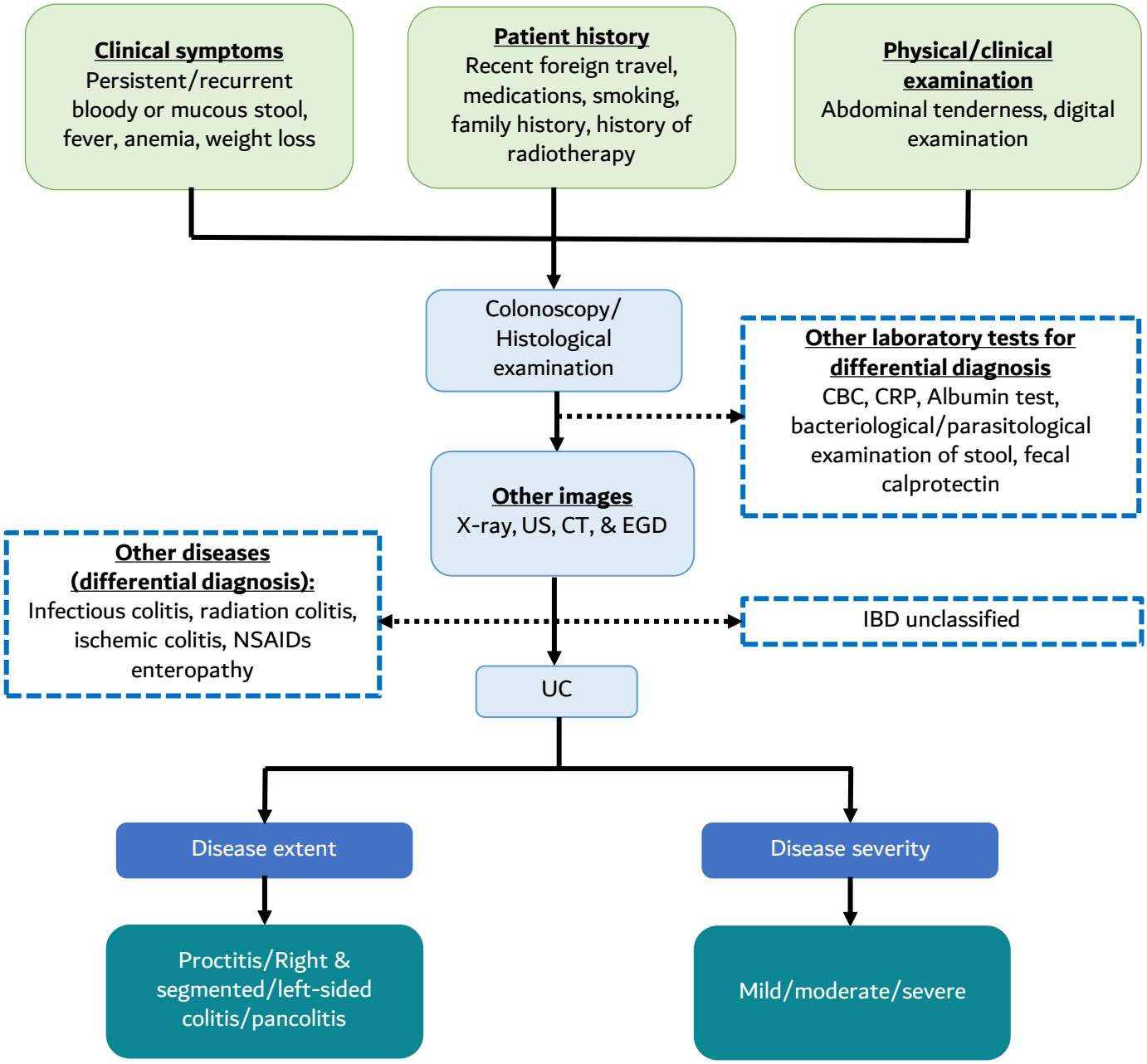
S.No.	Abbreviation	Full form
1	AED	United Arab emirates dirham
2	ASA	5-aminosalicylate
3	AZA	Azathioprine
4	CBC	Complete blood count
5	CD	Crohn's disease
6	CRP	C-reactive protein
7	CT	Computed tomography scan
8	EGD	Esophagogastroduodenoscopy
9	GI	Gastrointestinal
10	IBD	Inflammatory bowel disease
11	I.V.	Intravenous
12	6-MP	6-Mercaptopurine
13	MRI	Magnetic resonance imaging
14	NSAIDs	Non-steroidal anti-inflammatory drugs
15	SBCE	Small bowel capsule endoscopy
16	TNFα	Tumor necrosis factor alpha
17	UC	Ulcerative colitis
18	US	Ultrasound scan

KPIs and their Measuring Parameters

Reporting Frequency: Monthly

S.No.	KPIs	Measuring Parameters
1	Ileocolonoscopy with biopsy to confirm diagnosis in patients suspected of inflammatory bowel disease (IBD)	Ileocolonoscopy, biopsy
2	Stool culture and clostridium difficile toxin assay to exclude C. Difficile infection in patients suspected of IBD	Stool culture, clostridium difficile toxin assay
3	Small bowel capsule endoscopy (SBCE) to confirm Crohn's disease (CD)	Small bowel capsule endoscopy
4	Cross-sectional imaging (MRI/CT/US) for the diagnosis of obstructive Crohn's disease (CD)	MRI/CT/US
5	Rectal 5-aminosalicylate (ASA) suppositories for induction of remission in patients with mildly active UC (proctitis/left-sided UC)	DDC list of drugs
6	5-ASA enema combined with oral 5-ASA for maintenance of remission in mild to moderate active left-sided UC	DDC list of drugs
7	Corticosteroids for induction of remission in patients with mild to moderate active extensive UC who were non-responders to 5-ASA treatment	DDC list of drugs
8	Anti-TNFα therapy for induction of remission in mild to moderate active extensive UC patients who were refractory to oral steroids	DDC list of drugs
9	Biologics (anti-TNFα/vedolizumab/tofacitinib) therapy for the maintenance of remission in UC patients	DDC list of drugs
10	Emergency surgery (colectomy) in UC patients	Emergency colectomy
11	Hospitalization of patients with acute severe UC for inpatient care	Healthcare cost for hospitalization
12	Hospitalization of patients with acute severe UC for emergency colectomy	Healthcare cost for hospitalization
13	Mesalazine treatment to reduce risk of colorectal cancer in IBD patients	DDC list of drugs
14	Colonoscopy for colorectal cancer surveillance in IBD patients	Colonoscopy
15	Fecal calprotectin test to monitor response to therapy in IBD patients	Fecal calprotectin test
16	Budesonide treatment for the induction of remission in patents with mildly active localized ileocecal Crohn's disease (CD)	DDC list of drugs
17	Systemic corticosteroids for the induction of remission in patients with active Crohn's colitis	DDC list of drugs
18	Immunomodulators/biologics treatment for the induction of remission in patients with Crohn's disease (CD)	DDC list of drugs
19	Immunomodulators/biologics treatment for the maintenance of remission in patients with CD	DDC list of drugs
20	Emergency abdominal surgery in patients with CD	Abdominal/laparoscopic surgery
21	Referral of IBD patients to smoking cessation clinics	Number of referral visits to smoking cessation clinics
22	Referral of IBD patients to psychological therapies	Number of referral visits to psychological therapy
23	Referral of IBD patients to nutritionist for the assessment of general nutritional status	Number of referral visits to nutritionist
24	Avoidable hospital admission indicator for IBD	Hospital admission
25	Cost incurred (in AED) due to emergency department visit in patients with IBD	Costs of ED visit

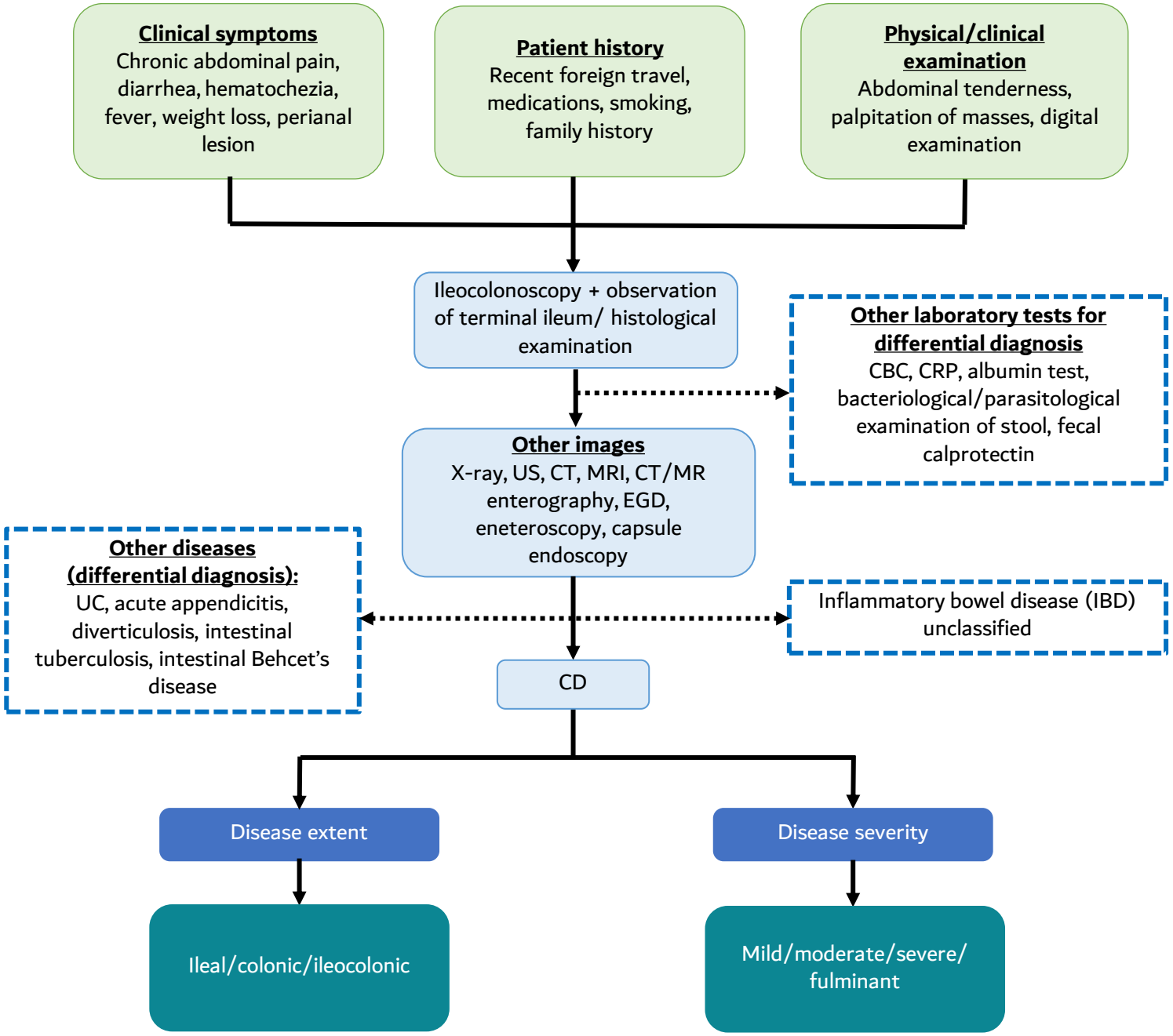
Diagnostic Approach for Ulcerative Colitis



ADAPTED & MODIFIED FROM: First UAE consensus on diagnosis and management of IBD - A 2020; Evidence-based clinical practice guidelines for IBD – 2020; ECCO-ESGAR Guideline for Diagnostic Assessment in IBD - 2019

Abbreviation: CBC, complete blood count; CRP, c-reactive protein, CT, computed tomography scan; EGD, esophagogastroduodenoscopy; IBD, Inflammatory bowel disease; UC, ulcerative colitis; US, ultrasound scan

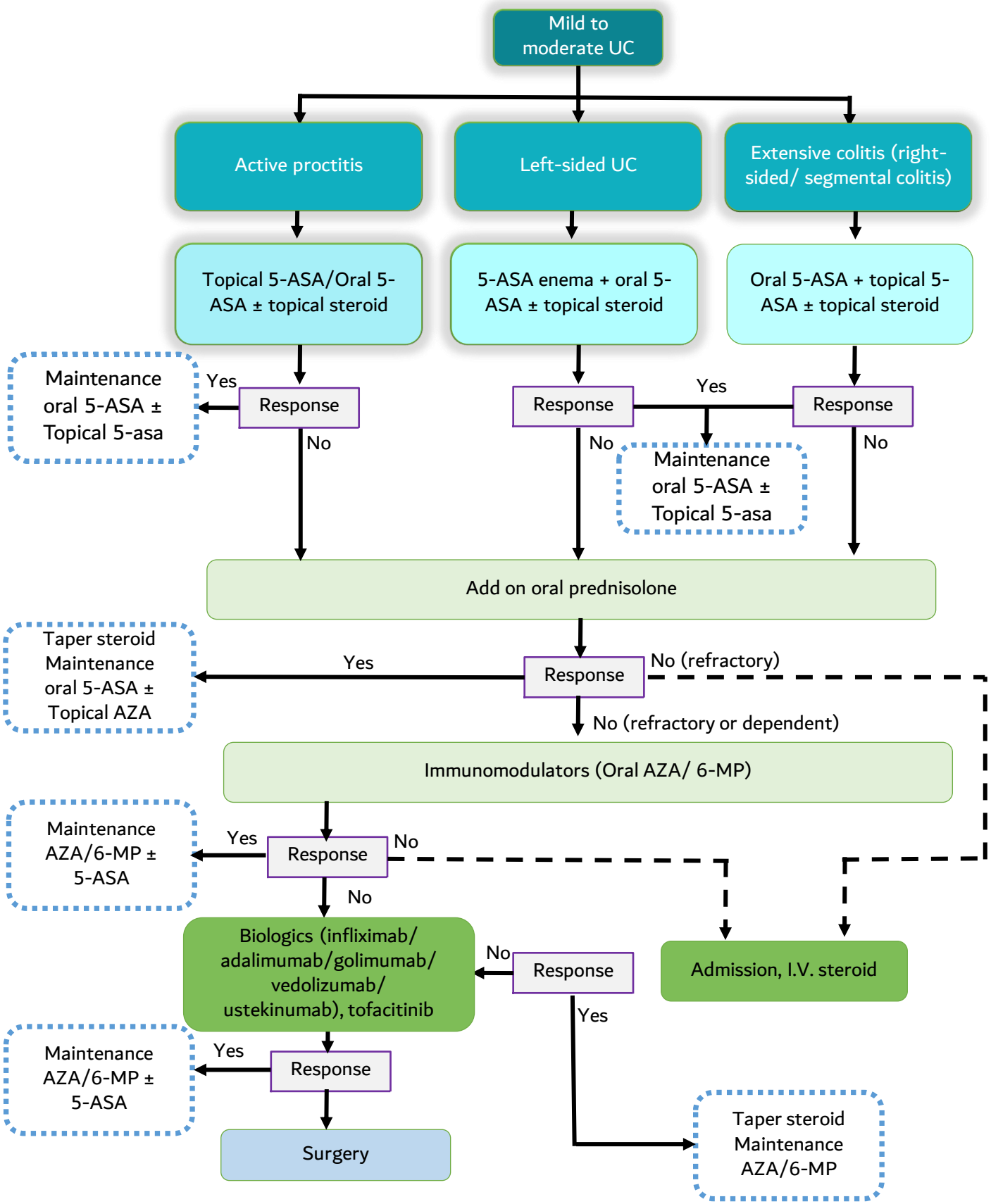
Diagnostic Approach for Crohn's Disease



ADAPTED & MODIFIED FROM: First UAE consensus on diagnosis and management of IBD - A 2020; Evidence-based clinical practice guidelines for IBD – 2020; ECCO-ESGAR Guideline for Diagnostic Assessment in IBD - 2019

Abbreviation: CBC, complete blood count; CRP, c-reactive protein, CT, computed tomography scan; EGD, esophagogastroduodenoscopy; IBD, Inflammatory bowel disease; UC, ulcerative colitis; US, ultrasound scan

Treatment for Mild to Moderate Active Ulcerative Colitis

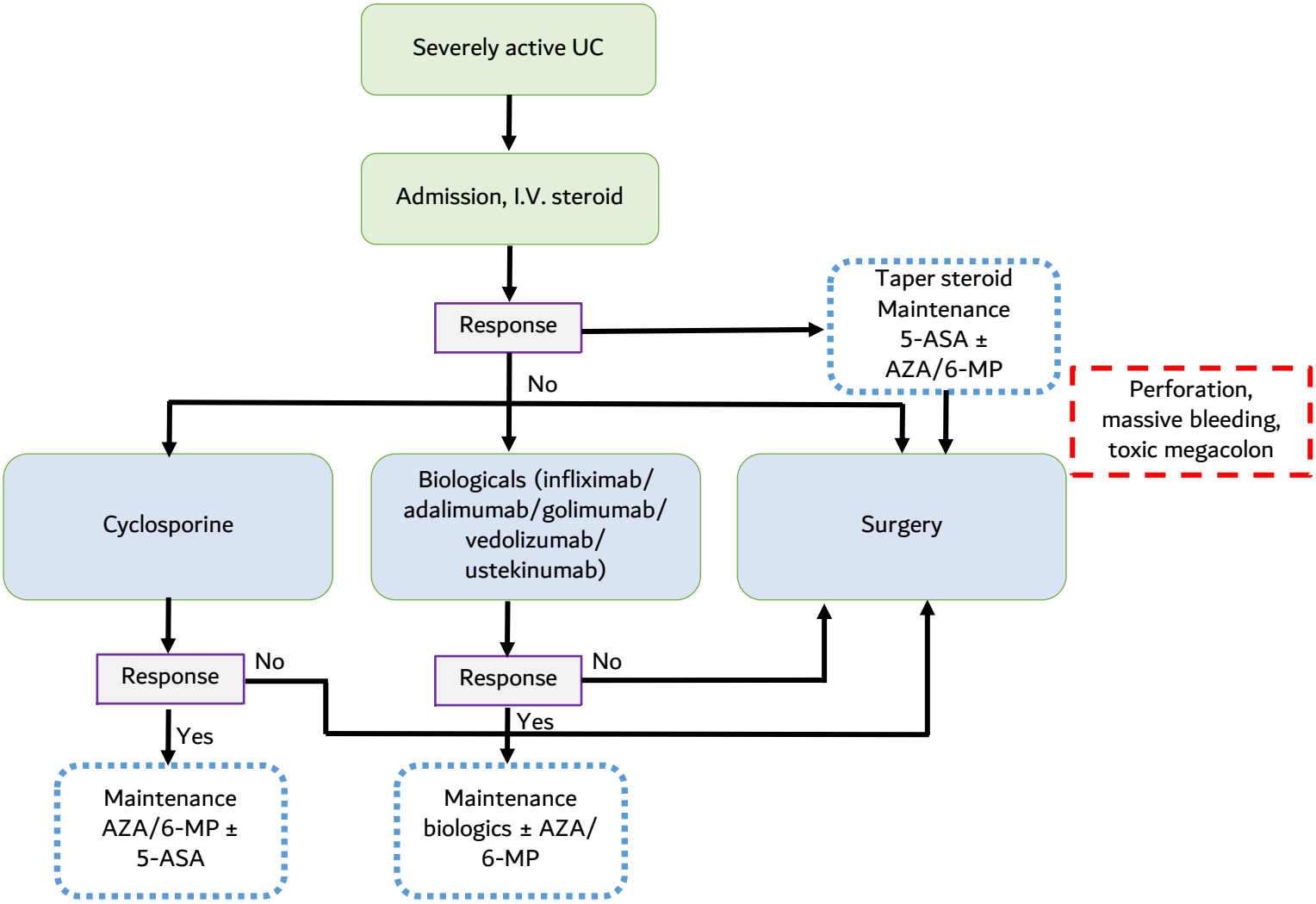


ADAPTED & MODIFIED FROM:

First UAE consensus on diagnosis and management of IBD - A 2020; ACG Clinical Guideline - 2019; Evidence-based clinical practice guidelines for IBD - 2020

Abbreviation: 5-ASA, 5-aminosalicylates (5-ASA); AZA, azathioprine; I.V., intravenous; 6-MP, 6-mercaptopurine; UC, ulcerative colitis

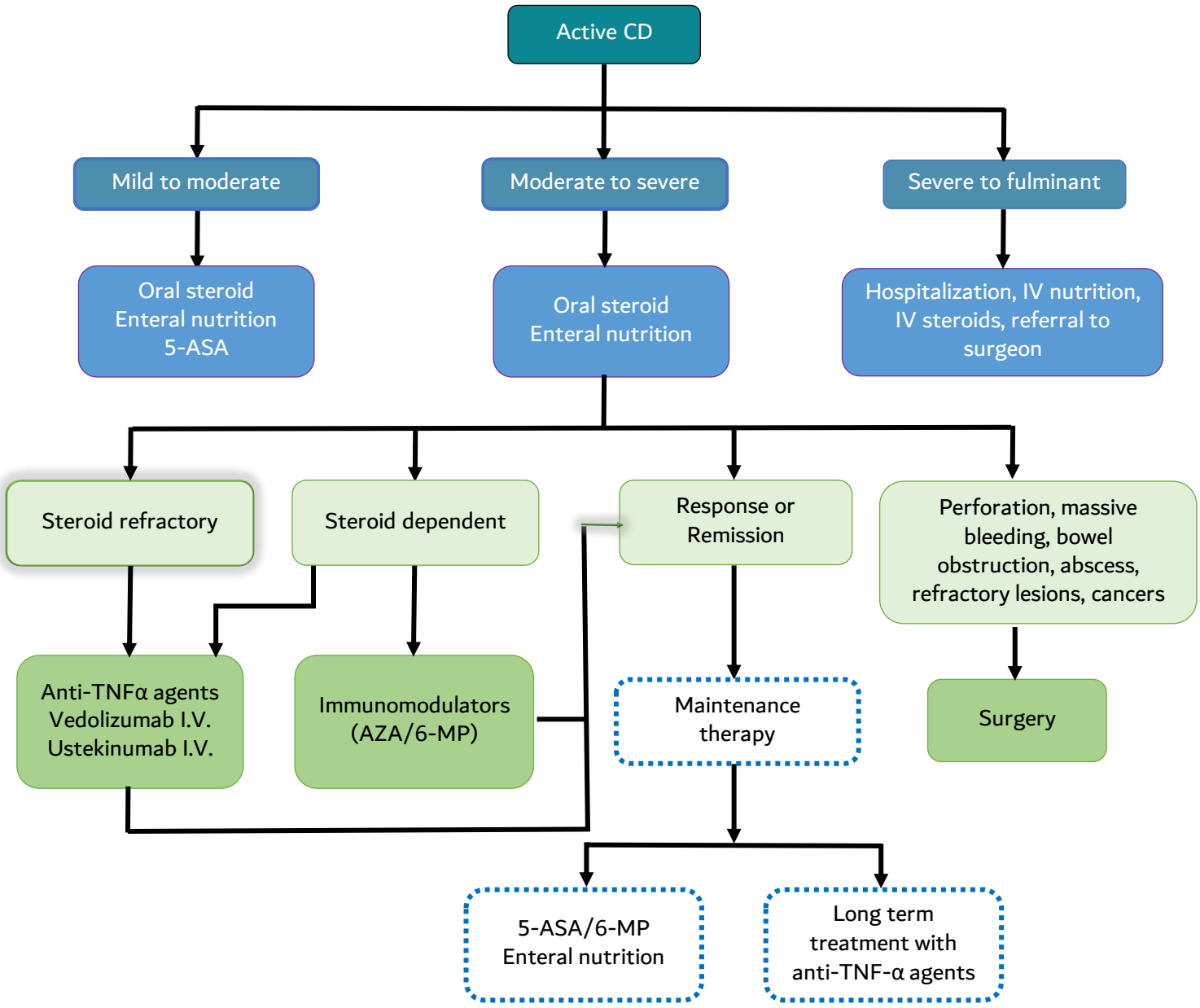
Treatment Algorithm for Severe Ulcerative Colitis



ADAPTED & MODIFIED FROM: First UAE consensus on diagnosis and management of IBD - A 2020; ACG Clinical Guideline - 2019; Evidence-based clinical practice guidelines for IBD - 2020

Abbreviation: 5-ASA, 5-aminosalicylates (5-ASA); AZA, azathioprine; 6-MP, 6-mercaptopurine; I,V., intravenous; UC, ulcerative colitis

Treatment Algorithm for Active Crohn's Disease



ADAPTED & MODIFIED FROM: ECCO Guidelines on Therapeutics in Crohn's Disease - 2020; AGA Clinical Practice Guidelines - 2021; Evidence-based clinical practice guidelines for IBD - 2020

Abbreviation: 5-ASA, 5-aminosalicylates (5-ASA); AZA, azathioprine; CD, Crohn's disease; 6-MP, 6-mercaptopurine; I.V., intravenous, TNF, tumor necrosis factor

Health Outcomes Indicators

Ileocolonoscopy with Biopsy to Confirm Diagnosis In Patients Suspected of Inflammatory Bowel Disease (IBD)

Description Title	Ileocolonoscopy with biopsy to confirm diagnosis in patients suspected of inflammatory bowel disease (IBD)
Definition	Percentage of patients in whom ileocolonoscopy was performed to confirm the diagnosis of IBD, during measurement year
Numerator	Number of patients in whom ileocolonoscopy was performed to confirm the diagnosis of IBD, during measurement year
Denominator	Total number of patients diagnosed with IBD
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	Ileocolonoscopy provides direct mucosal visualization of the colon and terminal ileum and allows histological assessment and therapeutic intervention. Hence, Ileocolonoscopy with multiple biopsy specimens is considered to establish diagnosis in patients suspected for IBD.

Stool Culture and Clostridium Difficile Toxin Assay to Exclude *C. Difficile* Infection in Patients Suspected of IBD

Description Title	Stool culture and *Clostridium difficile* toxin assay to exclude *C. difficile* infection in patients suspected of IBD
Definition	Percentage of patients suspected for IBD, in whom *Clostridium difficile* toxin assay was done to exclude *C. difficile*, during measurement year
Numerator	Number of patients suspected for IBD, in whom *Clostridium difficile* toxin assay was done to exclude *C. difficile*, during measurement year
Denominator	Total number of patients diagnosed with IBD
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	*Clostridium difficile* toxin assay should be done to exclude infectious etiologies of colon.

Small Bowel Capsule Endoscopy (SBCE) to Confirm Crohn's Disease (CD)

Description Title	Small bowel capsule endoscopy (SBCE) to confirm Crohn's disease (CD)
Definition	Percentage of patients with suspected IBD in whom SBCE was performed to confirm diagnosis of CD during measurement year
Numerator	Number of patients with suspected IBD in whom SBCE was performed to confirm diagnosis of CD during measurement year
Denominator	Total number of patients diagnosed with CD
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	SBCE is a sensitive tool to detect mucosal abnormalities in the small bowel. SBCE is recommended in patients with negative evaluations in Ileocolonoscopy and radiological examinations (MRI/CT). The presence of at least three small intestine ulcers in SBCE highly suggests a diagnosis of CD, provided the patient has not been using non-steroidal anti-inflammatory drugs (NSAIDs) for at least 1 month before the test. However, SBCE is contraindicated in the presence of GI obstruction, strictures, and swallowing disorders.

Cross-sectional Imaging (MRI/CT/US) for the Diagnosis of Obstructive Crohn's Disease (CD)

Description Title	Cross-sectional imaging (MRI/CT/US) for the diagnosis of obstructive Crohn's disease (CD)
Definition	Percentage of CD patients in whom cross-sectional imaging (magnetic resonance imaging /computed tomography /transabdominal ultrasonography) during measurement year
Numerator	Number of CD patients in whom cross-sectional imaging (magnetic resonance imaging / computed tomography /transabdominal ultrasonography) during measurement year
Denominator	Total number of patients diagnosed with CD
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	SBCE is contraindicated in GI obstruction, strictures, and swallowing disorders. Hence, cross-sectional imaging (MRI/CT/US) of the small bowel is recommended in preference to SBCE, where clinical symptoms indicate obstructive or stricturing small bowel CD. Due to radiation exposure with CT, the preferred methods are MRI and/or US.

Rectal 5-aminosalicylate (ASA) Suppositories for Induction of Remission In Patients with Mildly Active UC (Proctitis/Left-sided UC)

Description Title	Rectal 5-aminosalicylate (ASA) suppositories for induction of remission in patients with mildly active UC (proctitis/left-sided UC)
Definition	Percentage of patients with mildly active UC (proctitis/left-sided UC), in whom rectal 5-aminosalicylate (ASA) therapies at a dose of 1 g/d was prescribed for induction of remission during measurement year
Numerator	Number of patients with mildly active UC (proctitis/left-sided UC), in whom rectal 5-aminosalicylate (ASA) therapies at a dose of 1 g/d was prescribed for induction of remission during measurement year
Denominator	Total number of patients with ulcerative colitis
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	5-ASA is effective in inducing remission in active UC (proctitis and left-sided UC) and preventing the relapse of UC (proctitis and left-sided UC) in remission.

5-ASA Enema Combined with Oral 5-ASA for Maintenance of Remission In Mild to Moderate Active Left-sided UC

Description Title	5-ASA enema combined with oral 5-ASA for maintenance of remission in patients with mild to moderate active left-sided UC
Definition	Percentage of patients with mild to moderate active left-sided UC, in whom rectal 5-ASA enemas (1 g/d) combined with oral 5-ASA therapies (atleast a dose of 2 g/d) was prescribed for maintenance of remission, during measurement year
Numerator	Number of patients with mild to moderate active left-sided UC, in whom rectal 5-ASA enemas (1 g/d) combined with oral 5-ASA therapies (atleast a dose of 2 g/d) was prescribed for maintenance of remission, during measurement year
Denominator	Total number of patients with UC
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	5-ASA enema combined with oral 5-ASA is more effective than oral or topical 5-ASA or topical steroids alone in the treatment of mild to moderate active left-sided UC.

Corticosteroids for Induction of Remission In Patients with Mild to Moderate Active Extensive UC who were Non-responders to 5-ASA Treatment

Description Title	Corticosteroids for induction of remission in patients with mild to moderate active extensive UC who were non-responders to 5-ASA treatment
Definition	Percentage of patients with mild to moderate active extensive UC who were non-responders to 5-ASA treatment and were prescribed with corticosteroids for induction of remission, during measurement year
Numerator	Number of patients with mild to moderate active extensive UC who were non-responders to 5-ASA treatment and were prescribed with corticosteroids for induction of remission, during measurement year
Denominator	Total number of patients with ulcerative colitis
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	Corticosteroids have potent anti-inflammatory properties and are effective for induction of remission in UC but have no efficacy for maintenance of remission, and their long-term use can lead to adverse events.

Anti-tnfα Therapy for Induction of Remission In Mild to Moderate Active Extensive UC Patients who were Refractory to Oral Steroids

Description Title	Anti-TNFα therapy for induction of remission in mild to moderate active extensive UC patients who were refractory to oral steroids
Definition	Percentage of patients with mild to moderate active extensive UC patients who were refractory to oral steroids, and were prescribed with Anti-TNFα therapy for induction of remission, during measurement year
Numerator	Number of patients with mild to moderate active extensive UC patients who were refractory to oral steroids, and were prescribed with Anti-TNFα therapy for induction of remission, during measurement year
Denominator	Total number of patients with ulcerative colitis
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients better
Rationale	Anti-TNFα agents (IFX, adalimumab, and golimumab)/ vedolizumab/ tofacitinib have all demonstrated superiority over placebo in the induction of clinical response and remission in UC.

Biologics (Anti-tnfα/Vedolizumab/Tofacitinib) Therapy for the Maintenance of Remission In UC Patients

Description Title	Biologics (anti-TNFα/vedolizumab/tofacitinib) therapy for the maintenance of remission in UC patients
Definition	Percentage of patients with UC in whom biologics (anti-TNFα/vedolizumab/ tofacitinib) were prescribed for the maintenance of remission during measurement year
Numerator	Number of patients with UC in whom biologics (anti-TNFα/vedolizumab/tofacitinib) were prescribed for the maintenance of remission during measurement year
Denominator	Total number of patients with ulcerative colitis in remission state
Exclusion criteria	Patients with active UC disease
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	Evidence suggests that Anti-TNFα therapy using adalimumab, golimumab, or infliximab/ vedolizumab/tofacitinib for maintenance of remission is effective after induction with anti-TNFα/vedolizumab/tofacitinib in patients with previously moderately to severely active UC.

Emergency Surgery (Colectomy) In UC Patients

Description Title	Emergency surgery (colectomy) in UC patients
Definition	Percentage of patients with UC in whom emergency surgery (colectomy) was performed during measurement year
Numerator	Number of patients with UC in whom emergency surgery (colectomy) was performed during measurement year
Denominator	Total number of patients with UC
Exclusion criteria	Patients without UC
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Lower % of patients is better
Rationale	Surgery (colectomy) in UC patients is indicated when the disease is medically resistant, there are intolerable side effects of medication, or when there is life-threatening hemorrhage, toxic megacolon or perforation.

Hospitalization of Patients with Acute Severe UC for Inpatient Care

Description Title	Hospitalization of patients with acute severe UC for inpatient care
Definition	Percentage of patients with acute severe UC who required hospitalization for inpatient care during measurement year
Numerator	Number of patients with acute severe UC who required hospitalization for inpatient care during measurement year
Denominator	Total number of patients with ulcerative colitis
Exclusion criteria	Patients with mild UC disease
Unit of measure	Percentage [(Numerator/Denominator x 100)]
Measure target and/or threshold	Lower % of patients is better
Rationale	Patients with acute severe ulcerative colitis (UC) who have failed or have not responded to oral corticosteroid-based therapy as outpatients usually have to be admitted to the hospital for inpatient supervised care.

Hospitalization of Patients with Acute Severe UC for Emergency Colectomy

Description Title	Hospitalization of patients with acute severe UC for emergency colectomy
Definition	Percentage of patients with acute severe UC who required hospitalization for emergency colectomy during measurement year
Numerator	Number of patients with acute severe UC who required hospitalization for emergency colectomy during measurement year
Denominator	Total number of patients with ulcerative colitis
Exclusion criteria	Patients with mild UC disease
Unit of measure	Percentage [(Numerator/Denominator x 100)]
Measure target and/or threshold	Lower % of patients is better
Rationale	Surgery (colectomy) for patients with acute severe UC is indicated when the disease is medically resistant, there are intolerable side effects of medication, or when there is life-threatening hemorrhage, toxic megacolon or perforation.

Mesalazine Treatment to Reduce Risk of Colorectal Cancer In IBD Patients

Description Title	Mesalazine treatment to reduce risk of colorectal cancer in IBD patients
Definition	Percentage of patients with IBD in whom mesalazine therapy (2 g daily) was prescribed to reduce risk of colorectal cancer, during measurement year
Numerator	Number of patients with IBD in whom mesalazine therapy (2 g daily) was prescribed to reduce risk of colorectal cancer, during measurement year
Denominator	Total number of patients with IBD
Exclusion criteria	Patients without IBD
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	Patients with ulcerative colitis or IBD-U (IBD unclassified) with left-sided or more extensive disease should be advised to take mesalazine in doses of at least 2 g daily to reduce risk of colorectal cancer.

Colonoscopy for Colorectal Cancer Surveillance In IBD Patients

Description Title	Colonoscopy for colorectal cancer surveillance in IBD patients
Definition	Percentage of patients with IBD who underwent surveillance colonoscopy, during measurement year
Numerator	Number of patients with IBD who underwent surveillance colonoscopy, during measurement year
Denominator	Total number of patients with IBD
Exclusion criteria	Patients without diagnosis of IBD
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	Surveillance colonoscopies in patients with IBD should be performed at 1- to 3-year intervals based on the combined risk factors for colorectal cancer (CRC) and the findings on previous colonoscopy. Colonoscopy is also recommended to determine response to treatment and for surveillance of cancer development

Fecal Calprotectin Test to Monitor Response to Therapy in IBD Patients

Description Title	Fecal calprotectin test to monitor response to therapy in IBD patients
Definition	Percentage of IBD patients in whom fecal calprotectin test was carried out to monitor therapeutic response during measurement year
Numerator	Number of IBD patients in whom fecal calprotectin test was carried out to monitor therapeutic response during measurement year
Denominator	Total number of patients diagnosed with IBD
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	Fecal calprotectin can be used in patients with IBD as a noninvasive marker of disease activity and to assess response to therapy and relapse.

Budesonide Treatment for the Induction of Remission In Patents with Mildly Active Localized Ileocecal Crohn's Disease (CD)

Description Title	Budesonide treatment for the induction of remission in patents with mildly active localized ileocecal CD
Definition	Percentage of patients with mildly active localized Ileocecal CD in whom budesonide (9mg once daily for 8 weeks) was prescribed for the induction of remission during measurement year
Numerator	Number of patients with mildly active localized Ileocecal CD in whom budesonide (9mg once daily for 8 weeks) was prescribed for the induction of remission during measurement year
Denominator	Total number of patients with CD
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	Budesonide is recommended for the induction of clinical remission in patients with active mild-to moderate CD limited to the ileum and/or ascending colon. Budesonide is effective for control of symptoms of mild to moderate active localized ileocecal CD.

Systemic Corticosteroids for the Induction of Remission In Patients with Active Crohn's Colitis

Description Title	Systemic corticosteroids for the induction of remission in patients with active Crohn's colitis
Definition	Percentage of patients with active Crohn's colitis in whom systemic corticosteroids was prescribed for the induction of remission during measurement year
Numerator	Number of patients with active Crohn's colitis in whom systemic corticosteroids was prescribed for the induction of remission during measurement year
Denominator	Total number of patients with CD
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	Corticosteroids have potent anti-inflammatory effects and are useful for inducing the remission of CD.

Immunomodulators/Biologics Treatment for the Induction of Remission in Patients With Crohn's Disease (CD)

Description Title	Immunomodulators/biologics treatment for the induction of remission in patients with Crohn's disease (CD)
Definition	Percentage of patients with CD in whom immunomodulators (azathioprine/mercaptopurine/methotrexate) or biologics (anti-TNFα therapy/ustekinumab/vedolizumab) were prescribed for the induction of remission, during measurement year
Numerator	Number of patients with CD in whom immunomodulators (azathioprine/mercaptopurine/methotrexate) or biologics (anti-TNFα therapy/ustekinumab/vedolizumab) were prescribed for the induction of remission, during measurement year
Denominator	Total number of patients with CD
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	Immunomodulators such as azathioprine, mercaptopurine or methotrexate are effective in the treatment of Crohn's disease. Patients who are refractory to immunomodulator therapy despite dose optimization should be considered for biological therapy (Anti-TNFα therapy/ustekinumab/vedolizumab). Choice between these drugs should be made on an individual basis, considering patient preference, cost, likely adherence, safety data and speed of response to the drug.

Immunomodulators/Biologics Treatment for the Maintenance of Remission in Patients With CD

Description Title	Immunomodulators/biologics treatment for the maintenance of remission in patients with CD
Definition	Percentage of patients with CD in whom immunomodulators (azathioprine/mercaptopurine/methotrexate) or biologics (anti-TNFα therapy/ustekinumab/vedolizumab) were prescribed for the maintenance of remission during measurement year
Numerator	Percentage of patients with CD in whom immunomodulators (azathioprine/mercaptopurine/methotrexate) or biologics (anti-TNFα therapy/ustekinumab/vedolizumab) were prescribed for the maintenance of remission during measurement year
Denominator	Total number of patients with CD
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	Immunomodulators such as azathioprine, mercaptopurine or methotrexate are effective in the maintenance of remission f Crohn's disease. Biologics as maintenance therapy can be used in patients with CD who responded to biologics as induction therapy.

Emergency Abdominal Surgery in Patients with CD

Description Title	Emergency abdominal surgery in patients with CD
Definition	Percentage of patients with CD in whom emergency abdominal surgery was performed during measurement year
Numerator	Number of patients with CD in whom emergency abdominal surgery was performed during measurement year
Denominator	Total number of patients with CD
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Lower % of patients is better
Rationale	The indications for emergency abdominal surgery in CD patients include bowel obstruction, perforation, and bleeding. A laparoscopic approach to adhesiolysis and bowel resection is recommended if appropriate expertise exists, with care taken to avoid iatrogenic bowel injury in patients presenting with intestinal obstruction for CD.

Referral of IBD Patients to Smoking Cessation Clinics

Description Title	Referral of IBD patients to smoking cessation clinics
Definition	Percentage of patients with IBD who are smokers and were referred to a smoking cessation clinic during the measurement year
Numerator	Number of patients with IBD who are smokers and were referred to a smoking cessation clinic during the measurement year
Denominator	Number of patients with CD who are smokers
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients screened is better
Rationale	Cigarette smoking has an adverse effect on disease activity in IBD. All IBD patients should be asked about cigarette smoking. Smokers with IBD have an increased rate of surgery, IBD-related hospital admissions, and peripheral arthritis compared to nonsmokers. Active smoking is associated with penetrating disease and increases relapse risk even after discontinuation of biologic therapy

Referral of IBD Patients to Psychological Therapies

Description Title	Referral of IBD patients to psychological therapies
Definition	Percentage of patients with IBD referred to psychological therapies (cognitive behavioral therapy/hypnotherapy/mindfulness meditation) during the measurement year
Numerator	Number of patients with IBD referred to psychological therapies (cognitive behavioral therapy/hypnotherapy/mindfulness meditation) during the measurement year
Denominator	Number of patients with IBD treated with psychological therapies
Exclusion criteria	Patients without diagnosis of IBD
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients screened is better
Rationale	Patients with IBD should be assessed for any psychological symptoms such as stress, anxiety or depression and offered psychological therapies as appropriate. Psychological therapies are also beneficial in patients with IBD with unexplained pain.

Referral of IBD Patients to Nutritionist for the Assessment of General Nutritional Status

Description Title	Referral of IBD patients to nutritionist for the assessment of general nutritional status
Definition	Percentage of IBD patients who were referred to nutritionist for the assessment of general nutritional status during measurement year
Numerator	Number of IBD patients who were referred to nutritionist for the assessment of general nutritional status during measurement year
Denominator	Total number of patients with IBD
Exclusion criteria	Patients without diagnosis of IBD
Unit of measure	Percentage [(numerator/denominator x 100)]
Measure target and/or threshold	Higher % of patients is better
Rationale	Patients with IBD should have an assessment of their general nutritional status and screening for evidence of recent weight loss and/or assessment of malnutrition risk at each clinic appointment and on hospital admissions. IBD patients who are malnourished or at risk of malnutrition should have relevant screening blood tests to assess for macronutrient and micronutrient deficiencies. This may include measurement of iron stores, vitamin B12, folate, vitamins A, C, D and E, potassium, calcium, magnesium, phosphate, zinc and selenium.

Avoidable Hospital Admission Indicator for IBD

Description Title	Avoidable hospital admission indicator for IBD
Definition	Percentage of hospital admissions with a principal diagnosis of IBD during the measurement year
Numerator	Number of hospital admissions with a principal diagnosis of IBD during the measurement year
Denominator	Total number of patients with a principal diagnosis of IBD during the measurement year
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Percentage [(numerator/denominator)*100
Measure target and/or threshold	Higher the better
Rationale	Patients with IBD are at increased risk of developing adverse events related to the disease course, therapeutic interventions, or non-adherence to medication which could lead to hospitalization or readmission. Identifying patients with high risk factors for adverse events may allow for interventions during or after the index hospitalization that could decrease the risk of hospitalization, readmission and related costs.

Cost Incurred (In AED) Due to Emergency Department Visit in Patients with IBD

Description Title	Cost incurred (in AED) due to emergency department visit in patients with IBD
Definition	Average cost incurred (in AED) due to emergency department visit in patients with IBD with severe exacerbations during the measurement year
Numerator	Total cost incurred due to emergency department visits in patients with IBD with severe exacerbations who visited the ED during the measurement year
Denominator	Total number of IBD patients who visited emergency department for IBD with severe exacerbations in the measurement year
Exclusion criteria	Infectious colitis, radiation colitis, ischemic colitis, NSAIDs enteropathy
Unit of measure	Average (numerator/denominator)
Measure target and/or threshold	Lower is better
Rationale	Severe exacerbations of IBD are life-threatening medical emergencies, which are most safely managed in an acute care setting, such as emergency department. Appropriate management is crucial to reduce the emergency department visits and associated healthcare costs

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For any inquiries and additional information contact EJADAH team on (Ejadah-DHIC@dha.gov.ae)