

IBD in SARS-CoV-2 era

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SARS-Cov2

- The first cases of pneumonia with acute respiratory distress syndrome (ARDS) were described in **December 2019** in Wuhan, China, being caused by a new coronavirus, called SARS-CoV-2.
- The clinical presentation of COVID-19 includes, in addition to respiratory symptoms, digestive symptoms (nausea and vomiting, diarrhoea, diffuse abdominal pain, loss of appetite, weight loss) in a variable proportion of patients, up to 20% in some studies

Unexpected detection of SARS-CoV-2 antibodies in the pre-pandemic period in Italy

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Tumori Journal
1–6
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Nazionale dei Tumori 2020
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DOI: 10.1177/10300891620974755
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SAGE

There are no robust data on the real onset of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection and spread in the pre-pandemic period worldwide. We investigated the presence of SARS-CoV-2 receptor-binding domain (RBD)-specific antibodies in blood samples of 959 asymptomatic individuals enrolled in a prospective lung cancer screening trial between September 2019 and March 2020 to track the date of onset, frequency, and temporal and geographic variations across the Italian regions. SARS-CoV-2 RBD-specific antibodies were detected in 111 of 959 (11.6%) individuals, starting from September 2019 (14%), with a cluster of positive cases (>30%) in the second week of February 2020 and the highest number (53.2%) in Lombardy. This study shows an unexpected very early circulation of SARS-CoV-2 among asymptomatic individuals in Italy several months before the first patient was identified, and clarifies the onset and spread of the coronavirus disease 2019 (COVID-19) pandemic. Finding SARS-CoV-2 antibodies in asymptomatic people before the COVID-19 outbreak in Italy may reshape the history of pandemic.

Cases

Total ▾

 Worldwide ▾

Cases

114M

Recovered

64.2M

Deaths

2.52M

Location

Cases ↓

Recovered

Deaths



United States

28.6M

-

512K



India

11.1M
+16,752

10.8M
+11,718

157K
+113



Brazil

10.5M
+61,602

9.37M
+61,880

254K
+1,386



Russia

4.19M
+11,409

3.76M
+15,750

84,330
+430



United Kingdom


4.17M
+7,434

-

123K
+290

Cases

Total ▾

 Romania ▾

Cases

799K

+3,432

Recovered

739K

+2,549

Deaths

20,287

+54

What happened? Departments and circuits

- Lockdown...then
- Prioritizing and stratifying the indications according to the phases of the pandemic and the available medical resources
- Organized separate circuits for SARS-CoV-2 positive patients, besides SARS-CoV-2 negative patients.

Departments

- In order not to overcrowd the initial triage sector and the waiting rooms, but also the examination rooms, **virtual consultations** performed remotely, through-out telemedicine systems that allow audio-video interaction and viewing of preloaded medical documents, are preferable
- Internal meetings within departments and even multidisciplinary meetings (tumour board) are recommended to take place virtually for minimizing the number of people in the same room

- Training
- Consent
- Schedule
- Consult
- Document it!
- Correspondence -digital
- Further programming
- Inter disciplinary
- Prescription
- Data protection !!!
- Triage-emergencies



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journal homepage: www.elsevier.com/locate/dsx



Pitfalls in telemedicine consultations in the era of COVID 19 and how to avoid them

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Fig. 3 Telemedicine process lifecycle

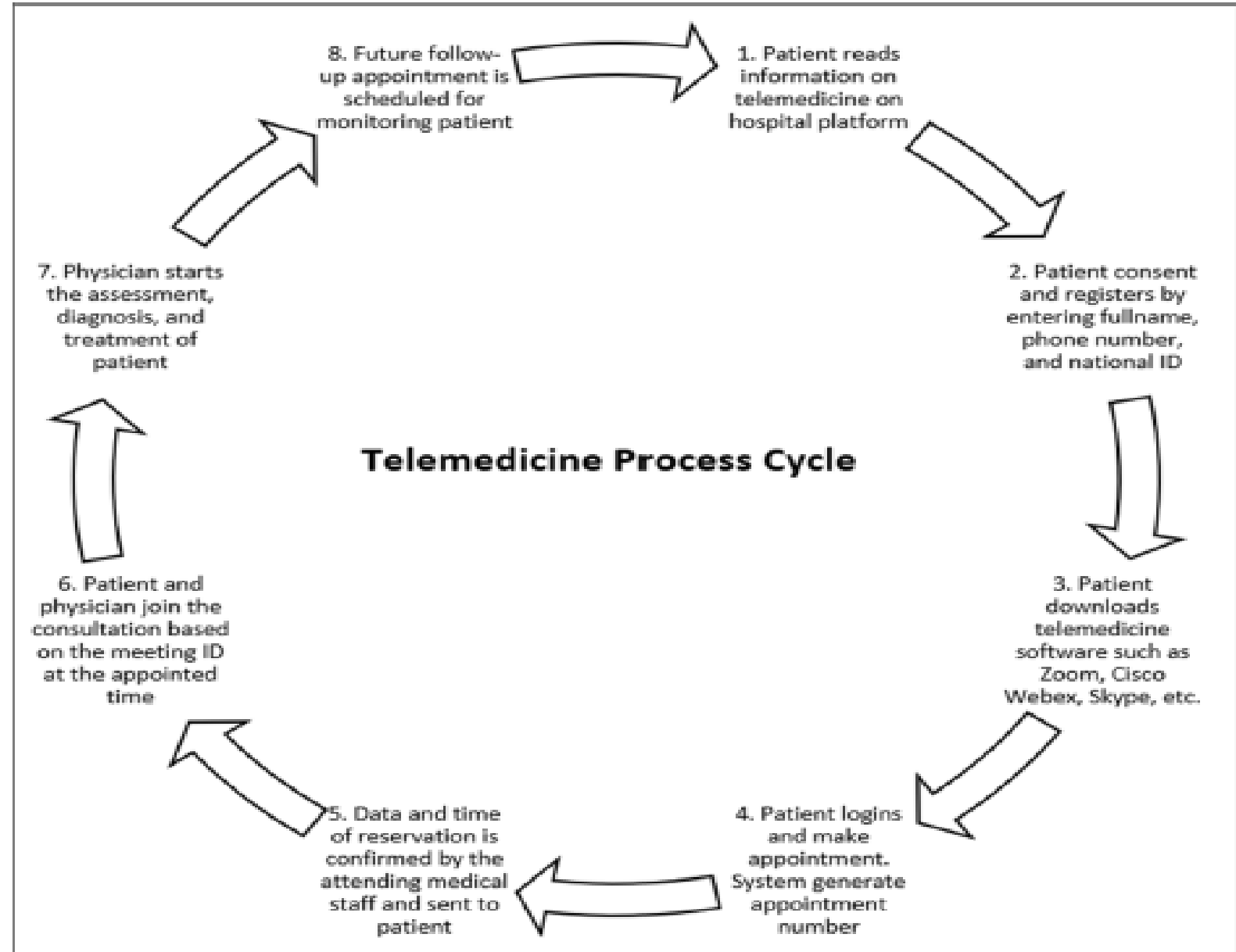


Table 1 Acceptable telemedicine platforms during COVID-19 period of non-enforcement


Telemedicine platforms specified as HIPAA compliant with business associate arrangement	The COVID-19 period of non-enforcement affects the following HIPAA non-compliant telemedicine platforms	The following platforms should be avoided even under the period of COVID-19 non-enforcement
Skype for Business/Microsoft Teams	Apple FaceTime	Facebook Live
Updox	Facebook Messenger video chat	Twitch
VSee	Google Hangouts video	TikTok
Zoom for Healthcare	Zoom	Other similar public-facing video communication applications
Doxy.me	Skype	
Google G Suite Hangouts Meet		
Cisco Webex Meetings/Webex Teams		
Amazon Chime		
GoToMeeting		
Spruce Health Care Messenger		



REVIEW ARTICLE



Telemedicine: Patient-Provider Clinical Engagement During the COVID-19 Pandemic and Beyond

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Received: 20 April 2020 / Accepted: 22 April 2020

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Telemedicine: future is the AI?

ARTICLE

Asked and Answered: Building a Chatbot to Address Covid-19-Related Concerns

Maguire Herriman, , Elana Meer, , Roy Rosin, MBA, Vivian Lee, MD, PhD, MBA, Vindell Washington, MD, Kevin G. Volpp, MD, PhD

Vol. No. | June 18, 2020

DOI: 10.1056/CAT.20.0230

Chatbot Triage Care Based on Patient Symptoms

In this exchange, the chatbot asks a series of questions designed to assess the patient's clinical status and to direct the patient to the appropriate next step. In this example, the algorithm determined that a non-urgent appointment is appropriate. The algorithm is shown in Appendix 1.

The screenshot shows a chatbot interface titled "Answers to Your COVID-19 Questions". It displays a sequence of questions and user responses:

- Question: "How many days ago did your fever start?"
Answer: "3 or fewer days"
- Question: "Are you 60 years of age or older?"
Answer: "Yes"
- Response: "Based on your answers we need to speak with you. Please call Penn Medicine OnDemand at 215-615-2222 to schedule an appointment. When you talk to a clinician, tell them you used the COVID Chatbot and your code is C2. Write down this code so you don't forget it! C2"
- Buttons: "Restart symptom checker" and "Ask a question"
- Input field: "Ask something..." with a "Feedback" link below it.

Source: Penn Medicine

NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society

Endoscopy

- SARS Cov2 is thought to spread primarily through droplets of saliva, but airborne transmission and fecal excretion have been documented
- **Healthcare professionals:** contact of saliva droplets with their face and airways, touch contamination, and contact with patient stools
- Peri-endoscopic aerosolized infections have also been reported, placing upper gastrointestinal (GI) endoscopy among the major aerosol-generating procedures
- In addition, the high numbers of **patients** and accompanying persons visiting an endoscopy unit each day further increases the risk of contaminating the staff.

► **Table 1** Impact of the COVID-19 pandemic on gastrointestinal endoscopy activity in France and comparison between the responses from those in the highest COVID-19 prevalence areas (North-East of France and Paris area) and those in the rest of the territory.

	Whole of France (n = 694)	Highest COVID-19 prevalence areas (n = 197)	Lowest COVID-19 prevalence areas (n = 497)	P value
Hospital's emergency plan been triggered, n (%)	547/608 (90.0)	163/172 (94.8)	384/436 (88.1)	0.02
Hospital had admitted COVID-19 patients, n (%)	505/694 (72.8)	156/197 (79.2)	349/497 (70.2)	0.02
Involvement of the gastroenterologist in the management of COVID-19 patients, n (%)	204/694 (29.4)	88/197 (44.7)	116/497 (23.3)	< 0.001
Consultations had been canceled, n (%)	660/694 (95.1)	179/197 (90.9)	481/497 (96.8)	0.003
Endoscopies had been canceled, n (%)	685/694 (98.7)	193/197 (98.0)	492/497 (99.0)	0.30
Endoscopy outpatient clinic closed, n (%)	511/694 (73.6)	155/197 (78.7)	356/497 (71.6)	0.07
Endoscopy procedures still possible for hospital inpatients, n (%)	342/694 (49.3)	54/197 (27.4)	288/497 (58.0)	< 0.001
Endoscopy procedures still possible for standard emergencies, n (%)	499/694 (71.9)	114/197 (57.9)	385/497 (77.5)	< 0.001
Endoscopy procedures still possible for vital emergencies, n (%)	662/694 (95.4)	183/197 (92.9)	479/497 (96.4)	0.07
Endoscopy procedures performed for COVID-19 patients, n (%)	65/694 (9.4)	35/197 (17.8)	30/497 (6.0)	< 0.001
Mean (SD) number of endoscopy procedures for COVID-19 patients	2.3 (0.7)	2.4 (0.5)	2.2 (0.8)	0.06
Specific circuit for COVID-19 patients, n (%)	305/694 (43.9)	75/197 (38.1)	230/497 (46.3)	0.05
Anesthesiologists or specialist nurses requisitioned, n (%)	497/694 (71.6)	162/197 (82.2)	335/497 (67.4)	< 0.001
Mechanical ventilators requisitioned, n (%)	342/694 (49.3)	122/197 (61.9)	220/497 (44.3)	< 0.001
Other materials from the endoscopy department requisitioned, n (%)	136/694 (19.6)	64/197 (32.5)	72/497 (14.5)	< 0.001
Endoscopy staff requisitioned for care of COVID-19 patients, n (%)	454/694 (65.4)	156/197 (79.2)	298/497 (60.0)	< 0.001

SD, standard deviation.

SRED-ARCE Recommendations for Minimally Invasive Interventions During the COVID-19 Pandemic in Romania

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Abstract

The Romanian Society of Digestive Endoscopy (SRED) and the Romanian Association of Endoscopic Surgery (ARCE) have decided to establish a joint working group to elaborate specific recommendations for organizing the diagnostic and the minimally invasive interventional procedures, in the context of the COVID-19 pandemic. The recommendations are based on the guidelines of the international societies of endoscopy and gastroenterology (ESGE / BSG / ASGE / ACG / AGA), respectively endoscopic surgery (EAES & SAGES) (4-8), on the experience of countries severely affected by the pandemic (Italy, France, Spain, USA, Germany, etc.) and they will be applied within the limits of measures imposed at local and governmental level by the competent authorities. On the other hand, these recommendations should have a dynamic evolution, depending on the upward or downward trend of the COVID-19 pandemic at regional and local level, but also according to the findings of professional and academic societies, requiring regular reviews based on the publication of further recommendations or international clinical trials. The objectives of the SRED and ARCE recommendations target the endoscopic and laparoscopic surgery activities, to support their non-discriminatory used for diagnostic or therapeutic purposes, pursuing the demonstrated benefits of these procedures, in safe conditions for patients and medical staff.

Key word: COVID-19

Doctors-seniors and residents alike

- Redeployed to other areas of the hospital, such as inpatient wards and emergency departments
- The shock of being pulled from clinics, consults, and endoscopy
 - Feel scared and lonely
 - Do I remember enough general medicine to be an effective hospitalist?
 - How do I place admission orders or perform a medication reconciliation on discharge?
 - What can I expect in the COVID ED?
 - Will I have to intubate someone?
 - What about possible PPE shortages?
 - Are my family members safe at home? Should I stay in a hotel?
 - Do we have estimates on how long this will last?

Physician's perception Evidences

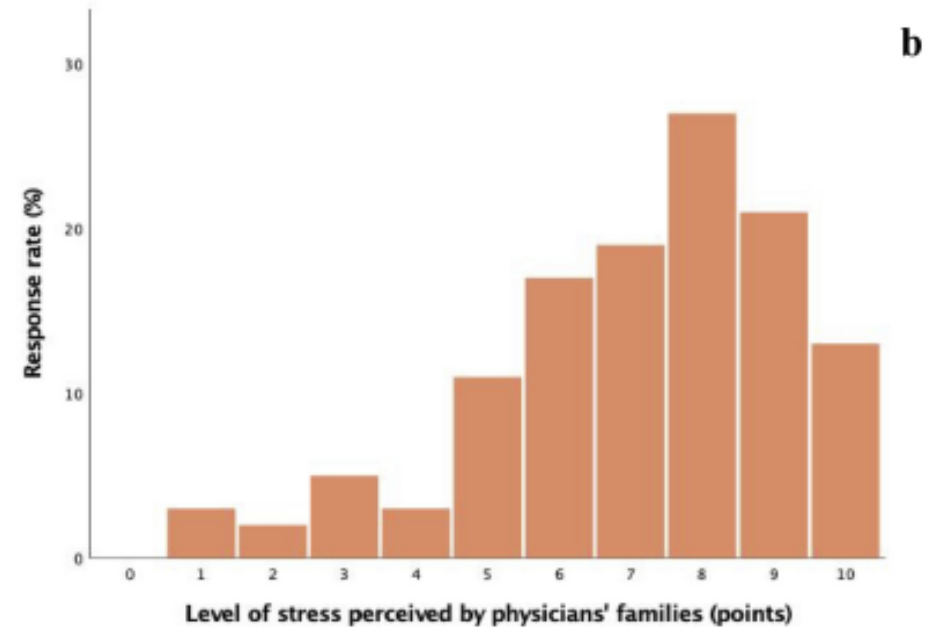
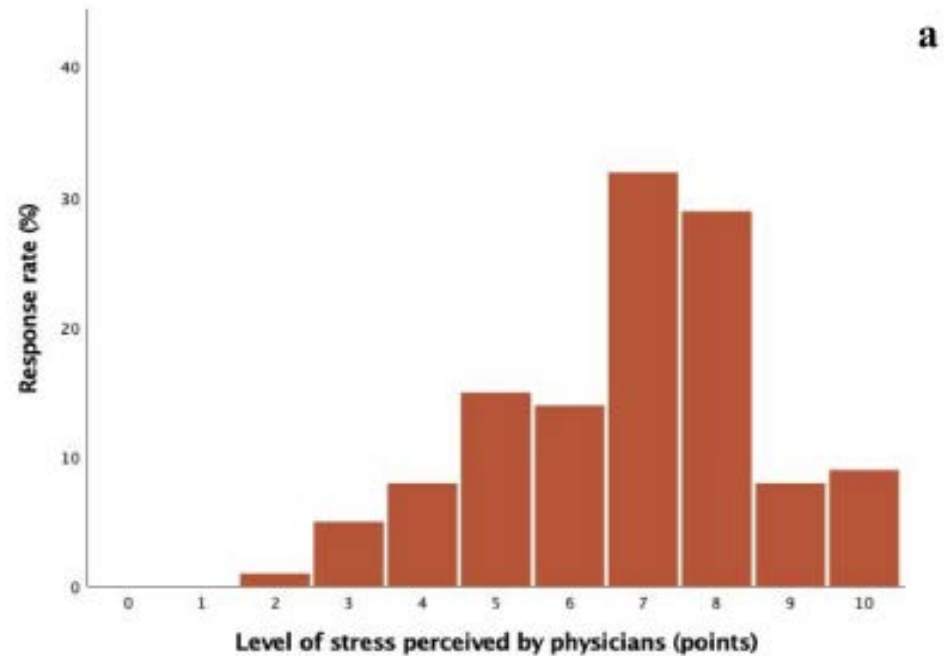


Fig. 4. Level of stress perceived by the physicians (a) and the physicians' families (b) since the COVID-19 outbreak.

Gastroenterology -"bad" things

- Significant reductions in endoscopy procedure volumes
- Involvement in endoscopy was also removed as only urgent cases were being performed and PPE conservation was of the utmost priority
- Cancellation of outpatient clinics
- Redeployment to non-GI services
- Cancellation of scientific conferences



“good” things

- Management of acute patients and emergencies referred to their hospitals (for example, those with gastrointestinal bleeding, acute pancreatitis, inflammatory bowel disease flares and end-stage liver disease complications)



“good” things

- Rotations in wards when not transformed to COVID-19 units
- Reformatting of lectures/conferences to virtual platforms
- Minimize overlapping of team members with a weekly schedule that minimized team handoffs
- Emulation towards teamwork, **moral values and sacrifice**



Domain of interest	Society	Key strategies and recommendations
Telemedicine in the GI practice	ASGE, WMA, and PSMID	<ul style="list-style-type: none"> – Consider telemedicine in nonurgent cases and for triaging patients referred for endoscopic procedures – Ensure that patients understand the benefits and risks of treatment and the medium through which care will be provided
Reopening of outpatient clinics	AMA, CDC, DOH, WHO, and PSMID	<ul style="list-style-type: none"> – Observe proper and rationale use of PPE, hand hygiene, and physical distancing to minimize risk and exposure – Educate staff on the signs and symptoms of COVID-19, infection control policies, and protocols – Adopt electronic health records, prescriptions, laboratory request forms, and noncontact payment mechanisms
Group practice in the management of inpatients	AMA	<ul style="list-style-type: none"> – Pursue group practice to preserve manpower and resources, especially invaluable supplies of PPE – Establish effective communication and proper coordination as these are key to settle and address issues within the group
Reopening of endoscopy units	ACG, AGA, APSDE, ASGE, BSG, CSG, ESGE, IDSA, and PSDE	<ul style="list-style-type: none"> – Consider local community disease control, staff availability, and adequate resources in the gradual resumption of elective endoscopy – Modify endoscopy unit operation policies and workflow to observe recommendations on safety, rational use of PPE, and testing – Perform pre-procedure screening prior to scheduling of procedures
Care of patients with liver disease	AASLD, EASL	<ul style="list-style-type: none"> – Use noninvasive risk assessment tools to stratify patients regarding the need to undergo endoscopic screening for varices – In patients with compensated cirrhosis, surveillance for HCC and screening for varices may be delayed for up to 2 months – For HCC, continue treatment and radiologic surveillance as scheduled. Postpone for elderly and those at higher risk for severe COVID-19 illness

Patients' perception

COVID-19 IBD patients' perception



This survey has been **co-designed with Pr. Silvio Danese, Head of the IBD Center at Humanitas University Hospital in Milan** in order to better understand the concerns and fears of the IBD community in the context of the COVID-19 pandemic.

The data have been collected during the period March, 30th – April, 16th.

Views of patients with inflammatory bowel disease on the COVID-19 pandemic: a global survey



Patients with chronic diseases have experienced substantial changes to the routine management of their conditions during the coronavirus disease 2019 (COVID-19) pandemic.^{1,2} Although insights into the management of patients with inflammatory bowel disease (IBD) during the outbreak have been described,³ little attention has been paid to the patients' point of view. Therefore, we did an anonymous web survey with the support of the European Federation of Crohn's and Ulcerative Colitis Associations (EFCCA) between March 30 and April 16, 2020, to investigate the concerns, fears, and behaviours of patients with IBD during the early phase of the COVID-19 pandemic.

The questionnaire was initially developed in English through the cooperation of IBD specialists and patient association representatives, focusing on the most frequent questions asked by patients during daily clinical practice. Subsequently, the questionnaire was translated into ten languages (Italian, Dutch, French, Spanish, Greek, Polish, Portuguese, Croatian, Bulgarian, and Slovenian) by volunteer native speakers. Patients with IBD were invited to participate in the survey via the EFCCA. We had responses from 3815 participants from 51 countries worldwide (appendix). The most represented region was Europe (32 [63%] of the 51 countries), followed by the Americas (nine [18%]), Asia (five [10%]), Australasia (three [6%]), and Africa (two [4%]). The mean age of the patients was 40.7 years (SD 12.8); most were women (2743 [72%] of 3815 respondents). More than half of the respondents had Crohn's disease (2211 [58%]), the remainder had ulcerative colitis (1528 [40%]) or indeterminate colitis (76 [2%]). Most respondents feared contracting COVID-19 (3242 [85%] of 3815 respondents) or infecting other people (3330 [87%]). Just under a third of patients believed that IBD predisposed them to an increased risk of COVID-19 (1150 [30%] of 3814 respondents), and nearly two-thirds of respondents stated that immunosuppressive drugs were associated with a higher risk of infection (2427 [64%] of 3815). In addition, most patients were concerned about contact with other people (3237 [85%] of 3815 respondents) and were afraid of travelling (3315 [87%] of 3814) and attending their hospital for follow-up consultations (2831 [74%] of

3814). Despite these worries, most patients (3373 [88%] of 3813 respondents) did not want to discontinue IBD medications during the pandemic and almost all (3670 [96%] of 3813 respondents) had not stopped taking their IBD medications on their own initiative. Importantly, about half of respondents reported receiving COVID-19 information (923 [44%] of 2116 respondents) or specific recommendations (1133 [52%] of 2172) from doctors to prevent infection. About a quarter of participants receiving recommendations were not satisfied with them (300 [23%] of 1304 respondents), but most patients (1184 [60%] of 1991) would have preferred to receive more recommendations regarding COVID-19 from their physician.

Most respondents reported reducing travel (3130 [96%] of 3256 respondents), modifying daily habits (3724 [98%] of 3814), and using protective aids (3183 [83%] of 3814) during daily life. The most adopted precautions were use of disinfectants (3074 [97%] of 3183 respondents), masks (2134 [67%]), and gloves (2015 [63%]). 1965 patients responded to questions regarding what factors helped to relieve their concerns and fears about COVID-19; patient associations (1601 [81%]) and relatives (1033 [53%]) were the most reassuring. By contrast—and worryingly—only a small proportion of people (218 [11%]) found relief from their fears and concerns about COVID-19 after a medical consultation.

The results of this survey highlight that a gap between doctors and patients still exists. There is an urgent need to improve physician-patient communication and to provide clear and specific recommendations in a period of substantial confusion for people with chronic diseases. The European Crohn's and Colitis Organisation, the British Society of Gastroenterology, and the International Organization for the Study of Inflammatory Bowel Diseases have responded to this request, providing practical guidelines for the management of patients with IBD during the pandemic, focusing not only on drug treatment but also on advice for daily life (eg, social distancing, use of masks, and travel avoidance).^{4,6} In patients with IBD who do not have symptoms suggestive of COVID-19,

Lancet Gastroent and Hepatol
2020
Published Online
May 13, 2020
[https://doi.org/10.1016/S2468-2653\(20\)30151-5](https://doi.org/10.1016/S2468-2653(20)30151-5)

See Online for appendix

Comment

immunosuppressive and biological drugs should not be discontinued as a preventive strategy, since there is no evidence to date to suggest that there is an increased risk of SARS-CoV-2 infection with these therapies.^{4,6} In addition, patients are recommended to stay at home, avoid travel, respect the rules of social distancing (at least 1 m between one person and another), pay close attention to hand hygiene, and use protective masks outside the home.^{4,6} In this context, patient associations are a key link between doctors and patients and should be increasingly involved in patient management. Close cooperation could allow greater patient compliance with the recommendations of health-care providers and could also help to establish long-lasting, trusting relationships.

J-FR has received lecture fees from AbbVie, Merck Sharp and Dohme (MSD), Takeda, Pfizer, Ferring, and Falk; consulting fees from AbbVie, Takeda, Hospira, Mundipharma, MSD, Pfizer, GlaxoSmithKline, and Amgen; and research support from Takeda and AbbVie. LP-B has received personal fees from AbbVie, Janssen, Genentech, Ferring, Tillots, Pharmacosmos, Celltrion, Takeda, Boehringer Ingelheim, Pfizer, Index Pharmaceuticals, Sandoz, Celgene, Biogen, Samsung Bioepis, Almac, Stema, Nestle, Enterome, Allergan, MSD, Roche, Arena, Gilead, Hikma, Amgen, Bristol-Myers Squibb, Vifor, Norgine, Mylan, Lilly, Fresenius Kabi, Oppilan Pharma, Sublimity Therapeutics, Applied Molecular Transport, OSE Immunotherapeutics, Enteraq, and Theravance; grants from AbbVie, MSD, and Takeda; and stock options from Clinical Trials Mobile Application. SD has served as a speaker, consultant, and advisory board member for Schering-Plough, AbbVie, Actelion, AlphaWasserman, AstraZeneca, Cellego, Cosmo Pharmaceuticals, Ferring, Genentech, Grunertal, Johnson and Johnson, Millenium Takeda, MSD, Nikkiso Europe, Novo Nordisk, Nycomed, Pfizer, Pharmacosmos, UCB Pharma, and Vifor. FDA and SL declare no competing interests.

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- 1 Guan W-J, Ni Z-Y, Hu Y, et al. Clinical characteristics of coronavirus disease 2019 in China. *N Engl J Med* 2020; **382**: 1708-20.
- 2 Wang Q, Hu B, Hu C, et al. Clinical characteristics of 138 hospitalized patients with 2019 novel coronavirus-infected pneumonia in Wuhan, China. *JAMA* 2020; **323**: 1061-69.
- 3 An P, Ji M, Ren H, et al. Prevention of COVID-19 in patients with inflammatory bowel disease in Wuhan, China. *Lancet Gastroent Hepatol* 2020; published online April 17. [https://doi.org/10.1016/S2468-2653\(20\)30121-7](https://doi.org/10.1016/S2468-2653(20)30121-7).
- 4 European Crohn's and Colitis Organisation. ECCO information on COVID-19. 2020. <https://ecco-ibd.eu/publications/covid-19.html> (accessed April 29, 2020).
- 5 Kennedy NA, Jones G-R, Lamb CA, et al. British Society of Gastroenterology guidance for management of inflammatory bowel disease during the COVID-19 pandemic. *Gut* 2020; published online April 17. DOI:10.1136/gutjnl-2020-321244.
- 6 International Organization for the Study of Inflammatory Bowel Disease. IIBD update on COVID-19 for patients with Crohn's disease and ulcerative colitis. April 23, 2020. <https://www.ioibd.org/ibd-update-on-covid19-for-patients-with-crohns-disease-and-ulcerative-colitis/> (accessed April 29, 2020).

OVERVIEW



58% Crohn's disease
 40% Ulcerative colitis
 2% Indeterminate colitis



37% private employee
 21% public employee
 12% student
 12% unemployed
 12% freelancer
 6% retired

3815 PARTICIPANTS:



72% female

28% male



41 y average age



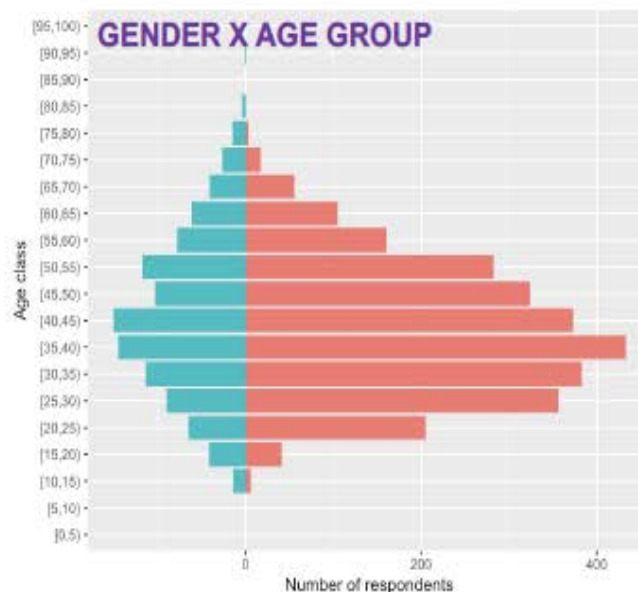
40% live with children



18% live with elderly

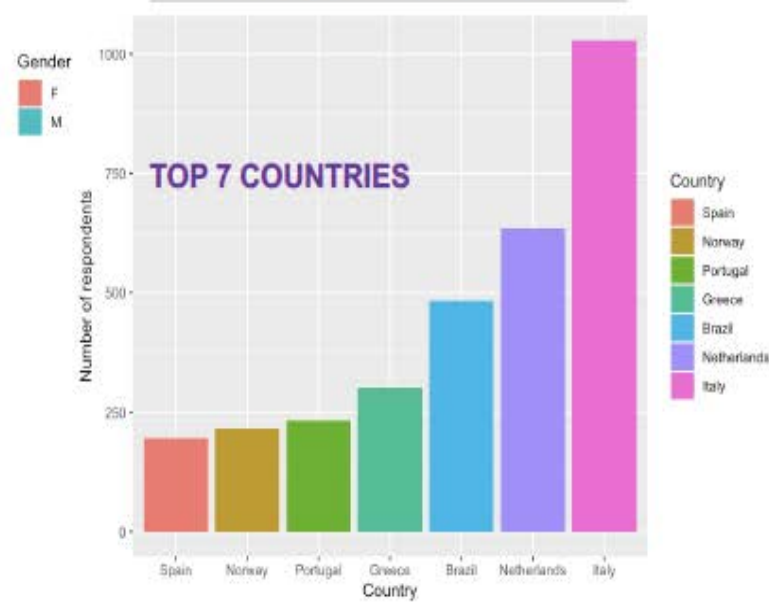


2007 average year of diagnosis



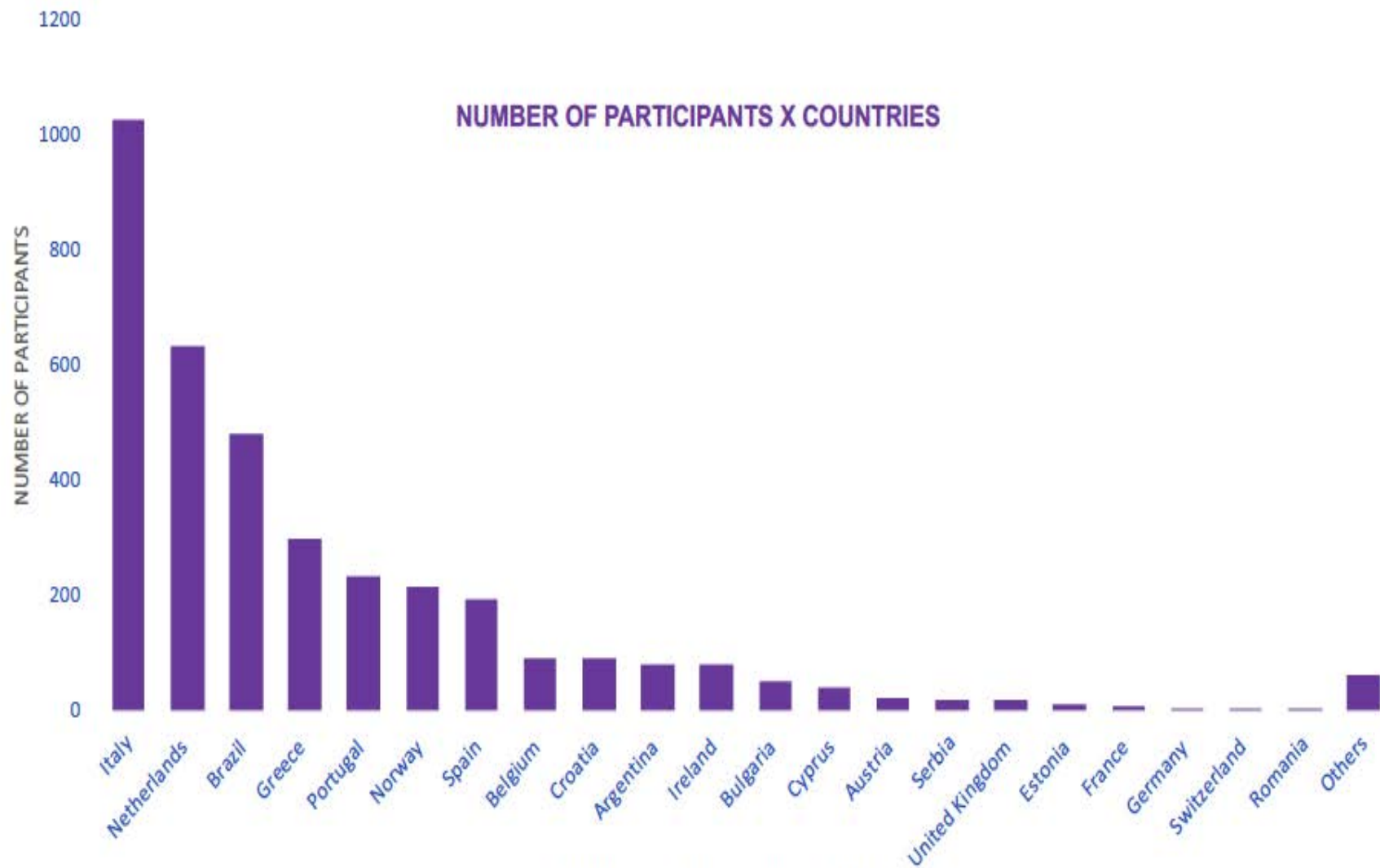
The graph above shows how females represent the majority and overall both genders belong to the 40-45 age class.

The graph below shows the TOP 7 COUNTRIES which participated to the survey.





OVERVIEW



PARTICIPANTS' CHARACTERISTICS N=3815 (+/- 0.05%)

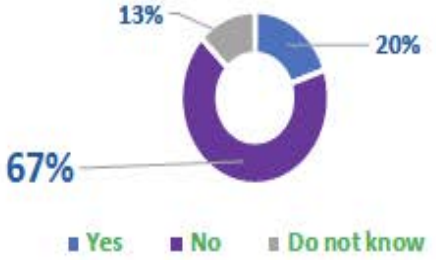
GENERAL FEELINGS

IS RESPIRATORY TRANSMISSION THE ONLY POSSIBLE TRANSMISSION?

97% THINK THAT COVID-19 INFECTION IS TRANSMITTED FROM PERSON TO PERSON



91% THINK THAT AN ASYMPTOMATIC PERSON CAN TRANSMIT THE INFECTION



96% THINK THAT A PATIENT WITH COVID-19 INFECTION CAN HEAL

97% THINK COVID-19 INFECTION CAUSE DEATH

65% ARE AFRAID OF DYING FROM COVID-19 INFECTION

78% THINK PROTECTIVE AIDS (E.G. MASKS, GLOVES, DISINFECTANTS) ARE ABLE TO PREVENT CONTAGION



83% USE PROTECTIVE AIDS (E.G. MASKS, GLOVES, DISINFECTANTS) TO PREVENT CONTAGION

- 1 DISINFECTANT
- 2 MASK
- 3 GLOVES

FEARS AND HABITS



51% THINK THERE IS SOMETHING THAT REDUCES FEAR AND WORRIES ABOUT COVID-19:

- 1 **42% Patient Association**
- 2 **27% Relatives**
- 3 **14% Recommendations from national and international authorities**
- 4 **7% Friends**
- 5 **6% Physician consultation**
- 6 **4% Psychologist**



57% FEEL SOCIAL ISOLATION



71% ARE NOT WORRIED FOR BEING IN QUARANTINE

94% THINK QUARANTINE IS IMPORTANT TO PREVENT CONTAGION

98% HAVE NOT UNDERTAKEN VOLUNTARY QUARANTINE

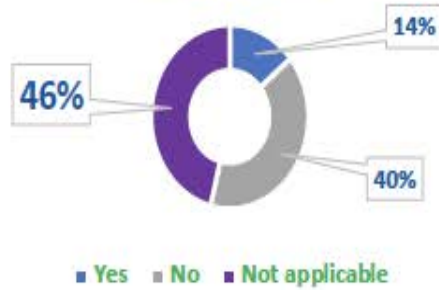


98% REDUCED THEIR DAILY HABITS (E.G. GOING TO THE SUPERMARKET, GOING TO THE RESTAURANT ETC)

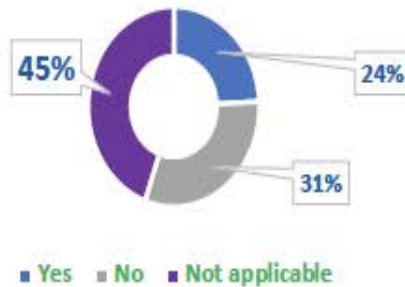


PHYSICIAN ACCESSIBILITY

ARE YOU HAVING PROBLEMS IN REACHING YOUR PHYSICIAN SINCE THE BEGINNING OF THE COVID-19 EMERGENCY?



DID YOUR PHYSICIAN GIVE YOU INFORMATION ABOUT COVID-19?



75% ARE AFRAID TO GO TO THE HOSPITAL / IBD CENTER FOR A GASTROENTEROLOGICAL CONSULTATION DUE TO THE COVID-19 VIRUS

73% FEEL STRESSED FROM THIS SITUATION

60% THINK THE STRESS MAY WORSEN THE SYMPTOMS OF THE DISEASE

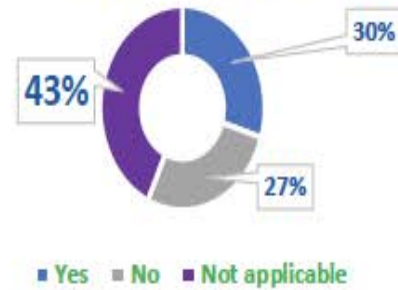


The majority of respondents are afraid to reach healthcare facilities, but equally they have no issue about reaching their doctor if needed.



PHYSICIAN RECOMMENDATIONS

DID YOUR PHYSICIAN GIVE YOU SPECIFIC RECOMMENDATIONS RELATED TO YOUR IBD (DRUGS, CONTACT ETC.) DURING THIS COVID-19 PANDEMIC?



ARE THERE ANY ADDITIONAL RECOMMENDATIONS ABOUT COVID-19 YOU WOULD LIKE FROM YOUR PHYSICIAN?



IF YOU RECEIVED RECOMMENDATIONS, ARE YOU SATISFIED WITH THE INFORMATION YOUR PHYSICIAN HAS PROVIDED YOU?



1/3 of the participants would like to receive more recommendations about COVID-19 from the physician.

Secure IBD: COVID-19 Risk Calculator

[About](#)[Results](#)[Details](#)[Contact](#)

Enter your information and click Calculate Risk.

Age (years):

Sex:

 Male Female

Country of Residence:

Height (cm):

Weight (in kilograms):

Race:

Ethnicity:

IBD Diagnosis:

IBD Disease Activity:

Comorbidities (select all that apply):

- Cardiovascular Disease
- Diabetes
- Asthma
- COPD
- Other chronic lung disease
- Hypertension

What is being estimated?

The three outcomes are Hospitalization+ (the event of either hospitalization or death will happen at some point), ICU+ (the event that ICU or ventilator will be needed, or death will happen at some point), and Death (the event of death will happen at some point). It is important to note that the estimated probabilities assume that the person has contracted COVID-19 and do not say anything about the probability of contracting COVID-19 in the first place.

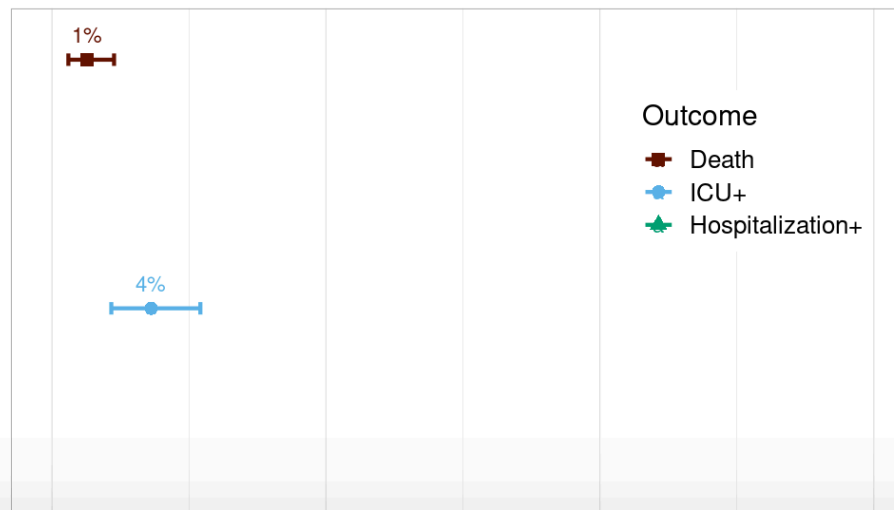
If this patient were to contract COVID-19, the risk of adverse outcomes would be:

Estimated probability of death given infection: **1.3%**

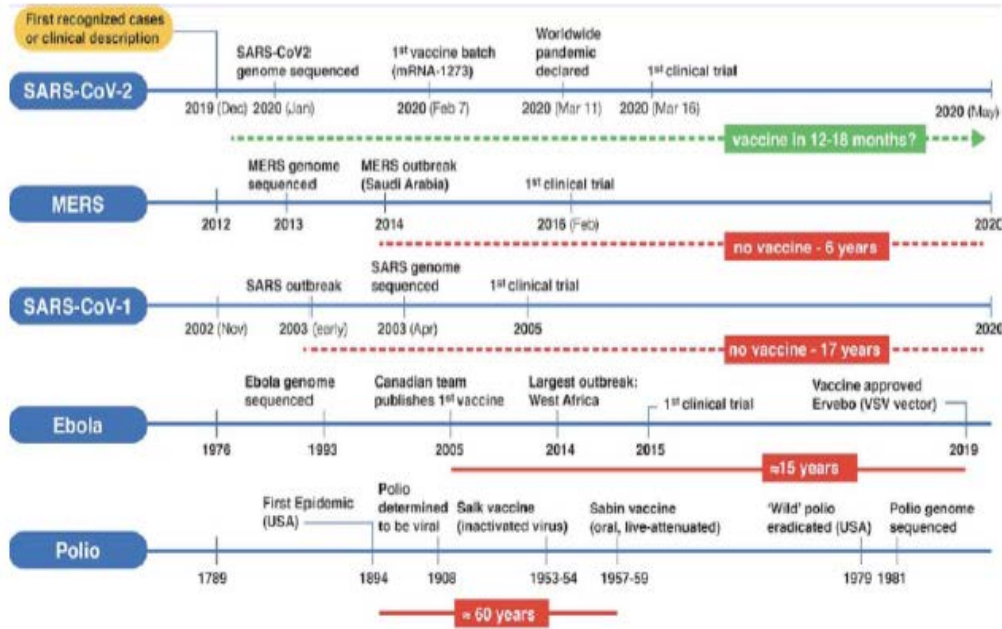
Estimated probability of ICU admission, ventilation, or death given infection: **3.6%**

Estimated probability of hospitalization or death given infection: **16.4%**

Risk of Adverse Outcomes from COVID-19

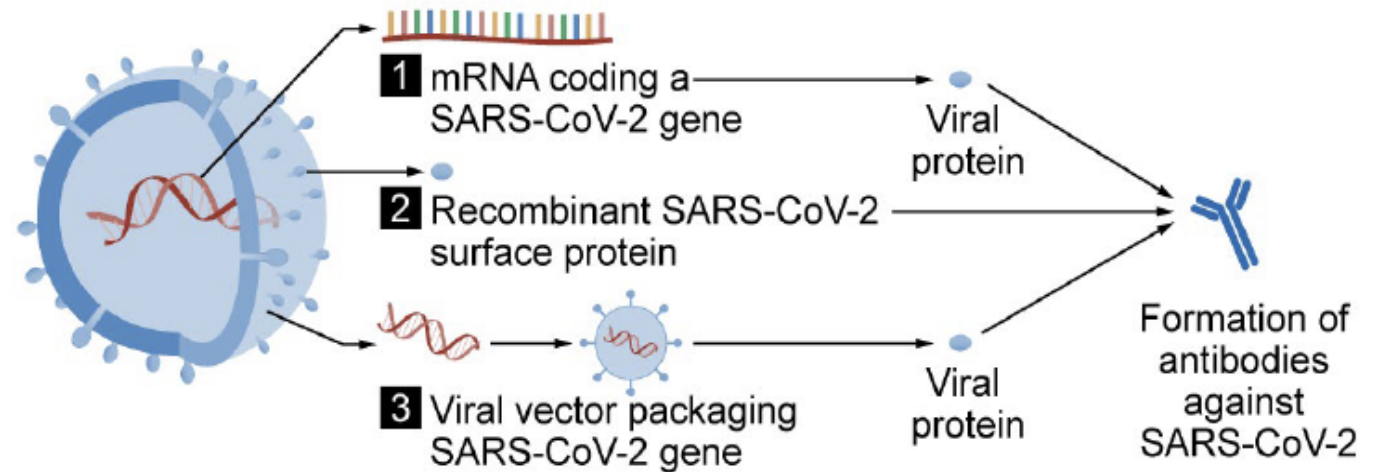


SARS-CoV-2 vaccination: A success story



Funk et al. Front Pharmacol 2020

SARS-CoV-2 vaccination: Pathways

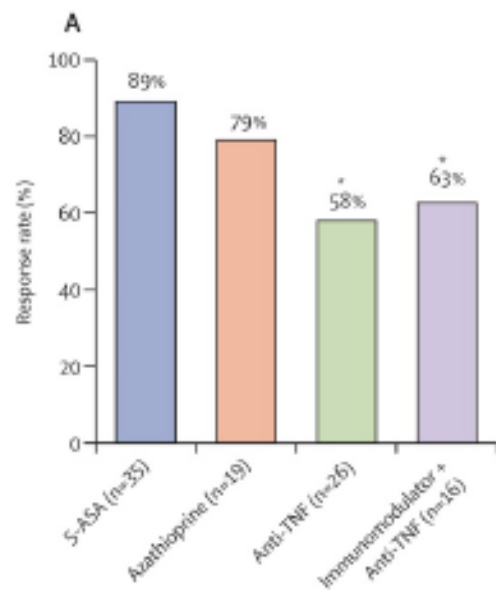


Source: GAO. | GAO-20-583SP

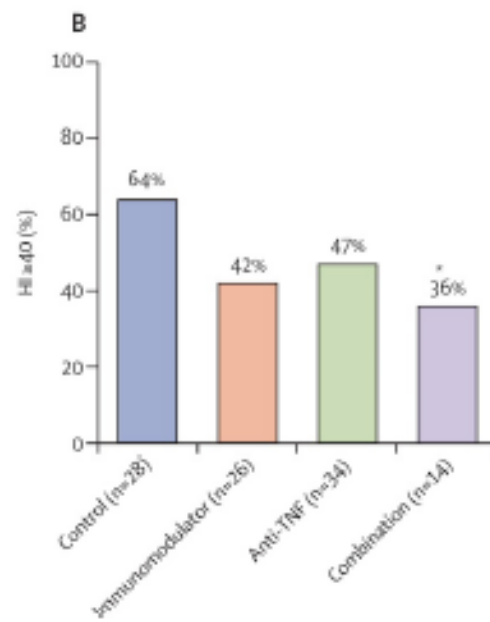
Overview of published phase 3 SARS-CoV-2 vaccination studies

	Pfizer/BioNTech ⁸	Oxford/AstraZeneca ⁹	Moderna ¹⁰
Name	BNT162b2	ChAdOx1 nCoV-19	mRNA-1273
Dosing schedule	2 doses, 21 days apart*	2 doses, 28 days apart*	2 doses, 28 days apart*
Mechanism	mRNA encoding a genetically modified SARS-CoV-2 spike protein	Non-replicating adenovirus vector, containing SARS-CoV-2 spike protein	mRNA encoding a genetically modified SARS-CoV-2 spike protein
Storage (long term)	-80°C to -60°C	+2°C to +8°C	-20°C
Reported efficacy	95%	70% [†]	94.5%
Safety	No serious concerns. Two anaphylactoid reactions since MHRA approval and roll-out	No serious concerns	No serious concerns
UK MHRA approval	Emergency approval granted Dec 2, 2020	Emergency approval granted Dec 30, 2020	Emergency approval granted Jan 8, 2021

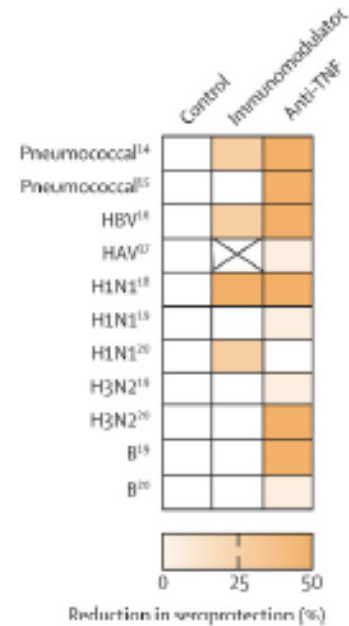
Immunogenicity of vaccines in patients taking immunosuppressive therapies



Pneumococcus Vaccine



H1N1 Influenza Vaccine



Key Messages about Covid-19 vaccination in IBD patients

- SARS-CoV-2 vaccination is strongly recommended for patients with IBD
- the risks of SARS-CoV-2 vaccination in patients with IBD are anticipated to be very low
- in patients with IBD taking immunosuppressive drugs, including biologics and small-molecule inhibitors, the key concerns are related to the theoretical risk of suboptimal vaccine responses rather than vaccine side-effects
- all currently available SARS-CoV-2 vaccines are recommended for IBD patients
- repeated vaccinations may be needed and recommended in patients with insufficient immune response following vaccination
- patients with IBD should be offered consistent and unbiased advice by specialist societies

Conclusions

- The only constant is change
- We must see this epidemic as an opportunity
- We must adapt our system of education and health care to the new reality
- Leadership is paramount
- Great thank to our students and our residents: they have been a model!

