COVID-19 and the GIT System

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Gastro-intestinal Symptoms:

- Diarrhoea
- Anorexia
- Nausea
- Vomiting
- Deranged liver enzymes

Studies looking at GIT sx's

Study(n=nr of COVID patients)	Jin et al (n=651)	Lin et al(n=95)	Parag et al(n=393)
Symptoms:	- Diarrhoea - Nausea - Vomiting - Deranged liver enzymes	- Diarrhoea - Impaired LFT's - Vomiting - Nausea	- Diarrhoea - Nausea - Vomiting - Deranged LFT's
GI Symptoms alone	28%	61%	Not done
Severity	Worse outcomes: - ICU admission - High Fever - Liver Injury - Family clustering	Also worse Outcomes	- Deranged LFTS associated with worse outcome
Key notes:	- More GIT symptoms	Endoscopy - Esophagus - Stomach - Duodenum - Rectum	More GIT symptoms (4-5% of patients)
	- Higher mortality when associated	Stool -53.4% cases	ICU –Transaminases

Stool samples:

- Several studies have detected the virus in stool
- Between day 1 -12 of disease with mean of +/- 7.8 days
- Xiao et al: >20% cases after infection
- Singapore:

- 50% detected virus in stool
- 25% had GIT symptoms

- No clear correlation between symptoms and virus in stool

Wu Y, Guo C, Tang L, et al. Prolonged presence of SARS-CoV-2 viral RNA in faecal samples. *The lancet Gastroenterology – hepatology.* 2020.

RT-PCR STOOL TESTING

Coronavirus Stool Testing

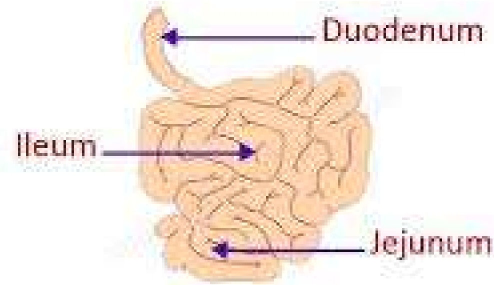
Tuesday, March 31, 2020

Monitor, Manage, and Prevent Transmission of COVID-19 with the New SARS-CoV-2 qPCR Stool Test from Diagnostic Solutions Laboratory

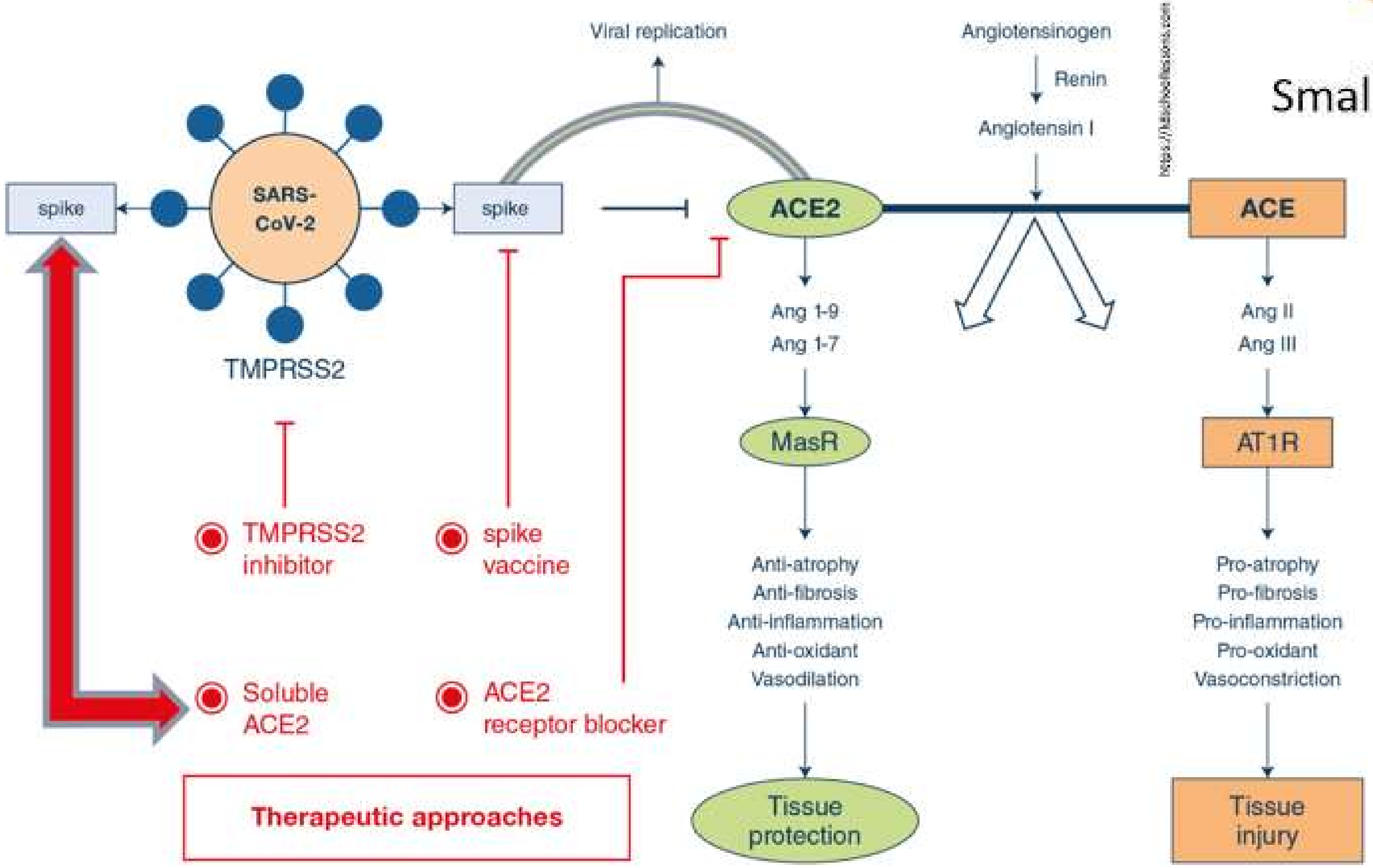
by Tom Fabian, PhD, CNTP, and Cass Nelson-Dooley, MS

- 30 days after respiratory clearance
- 5 weeks after respiratory clearance
- Prevent feacal-oral transmission

ACE-2 protein



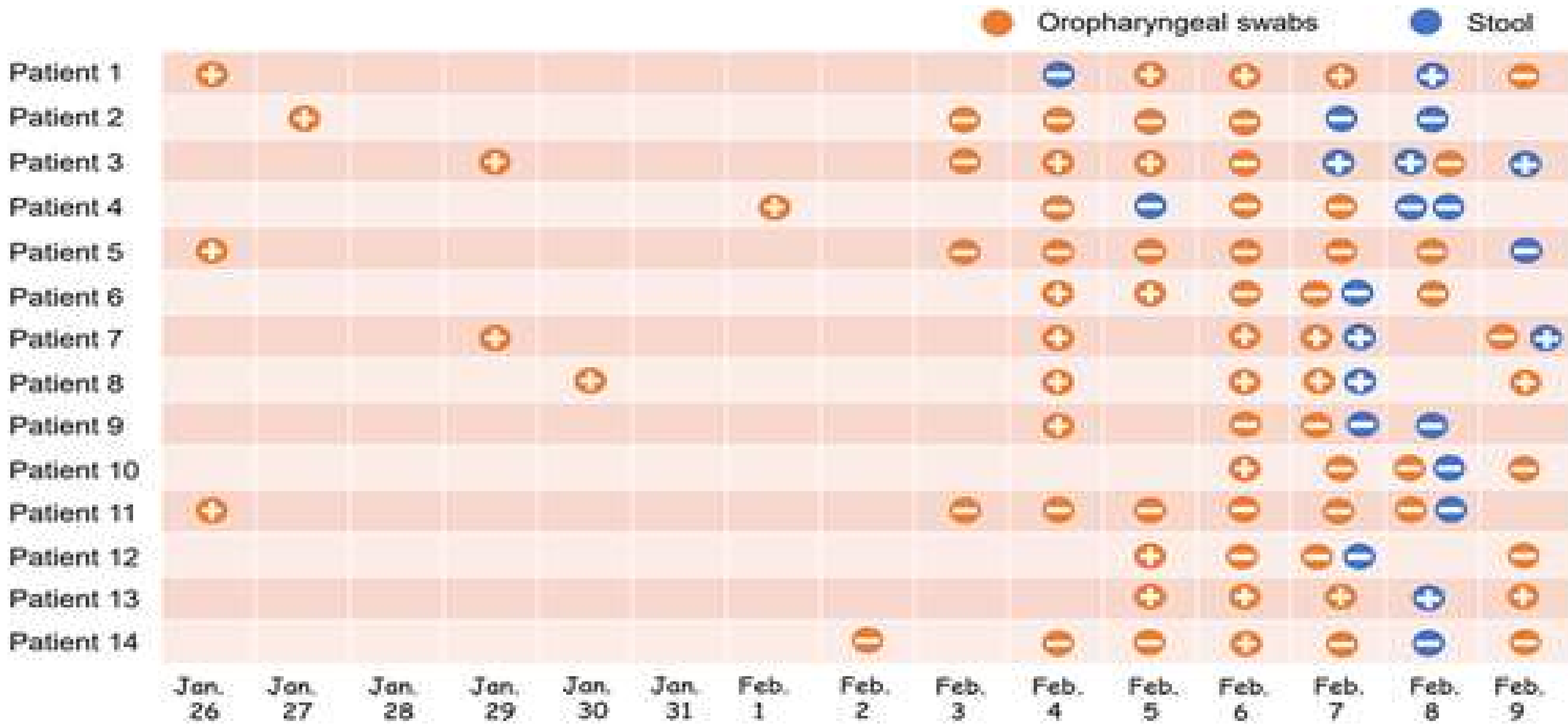
Small Intestine



JOURNAL OF
MEDICAL VIROLOGY

- Fecal specimen diagnosis 2019 novel coronavirus-infected pneumonia

Zhang et al



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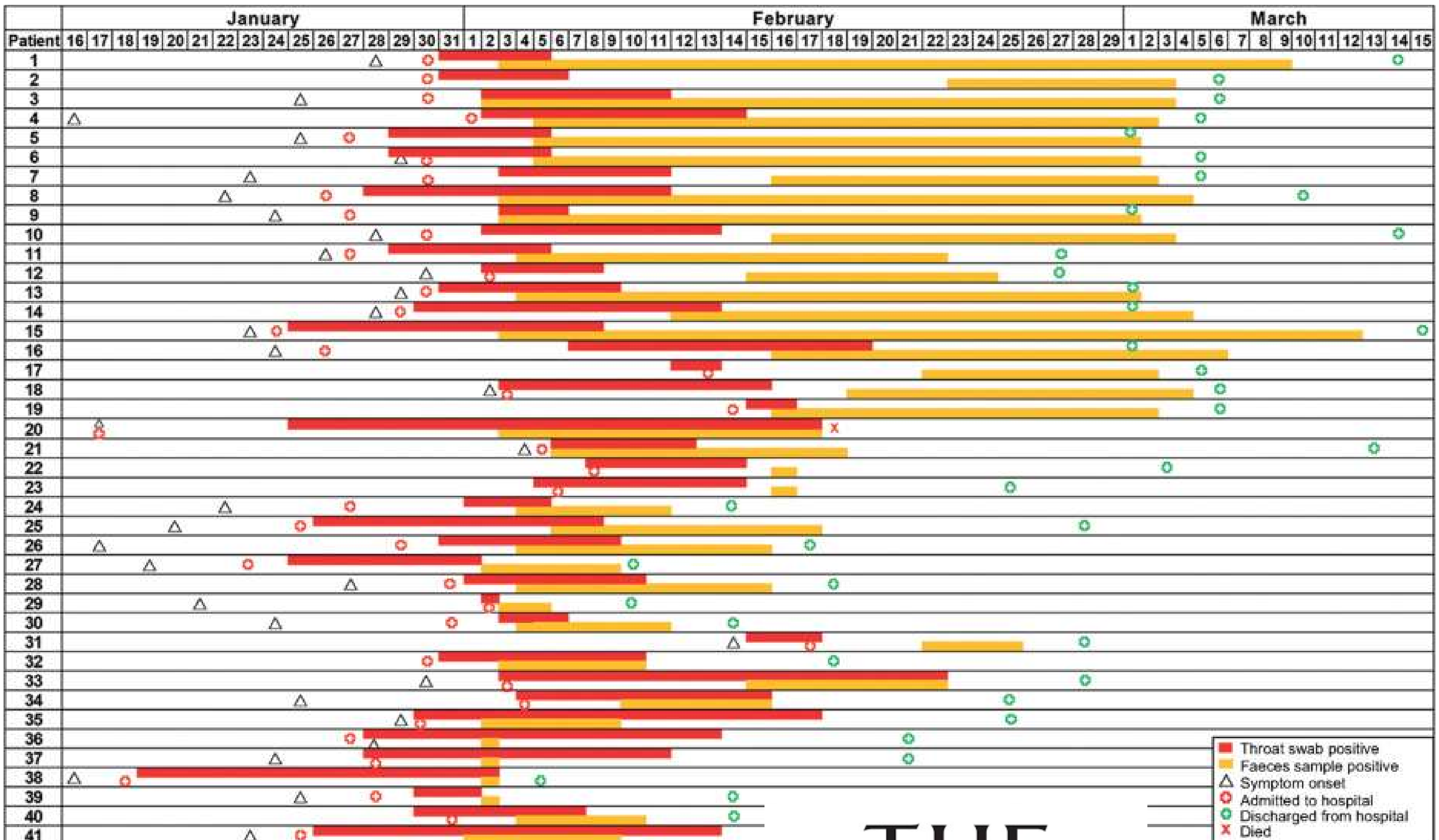
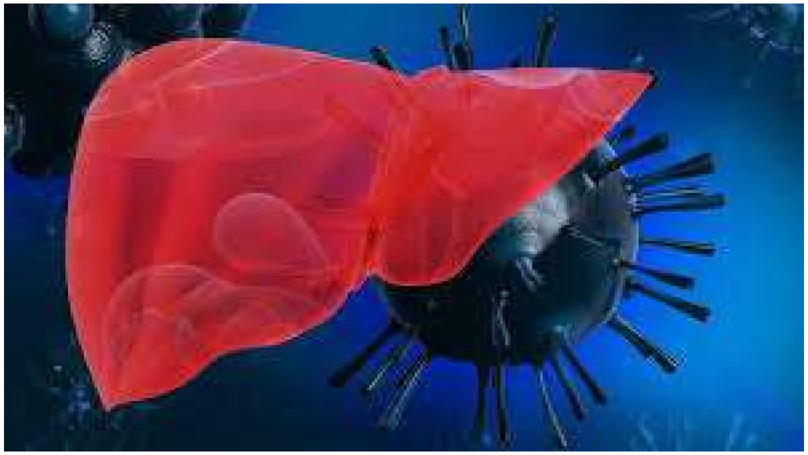


THE LANCET

Liver derangement:



- Similar to other viruses
- Transaminases
- Underlying liver disease
- Poor prognostic sign
- Other causes for liver injury:
- Medication
- NAFLD – high risk patient population

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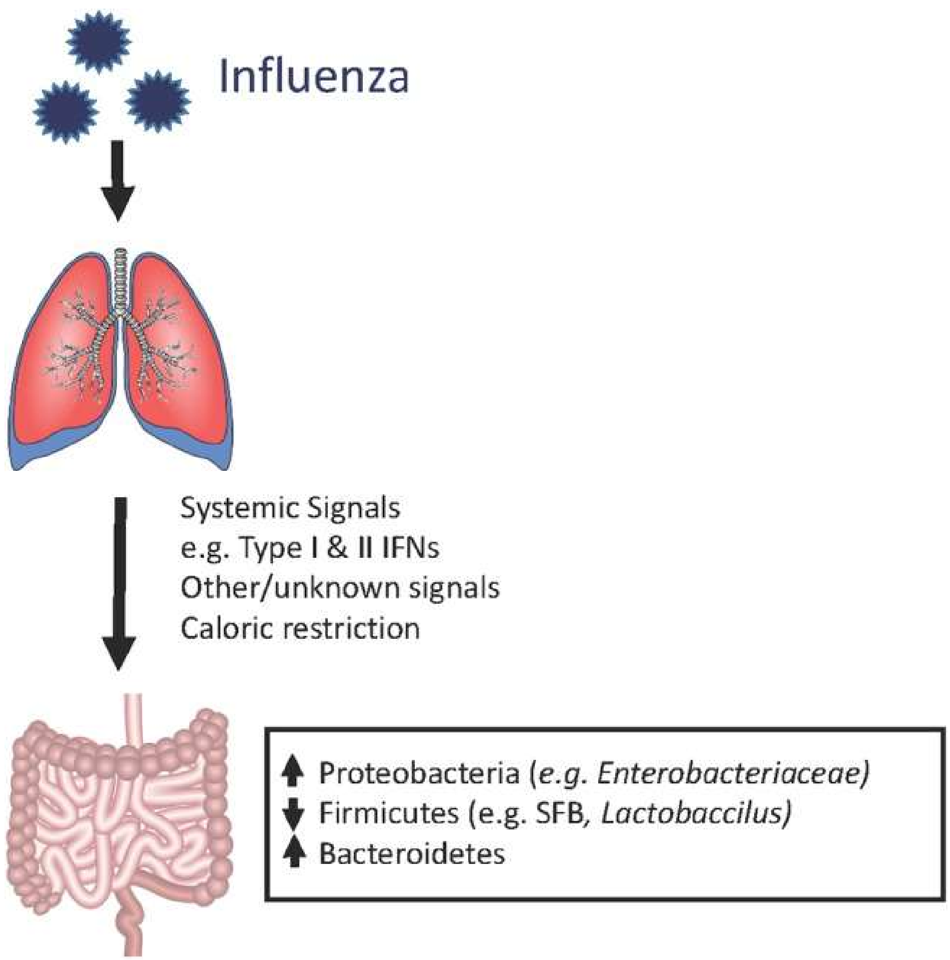
Microbiome



Front Immunol. 2018; 9: 2640.