

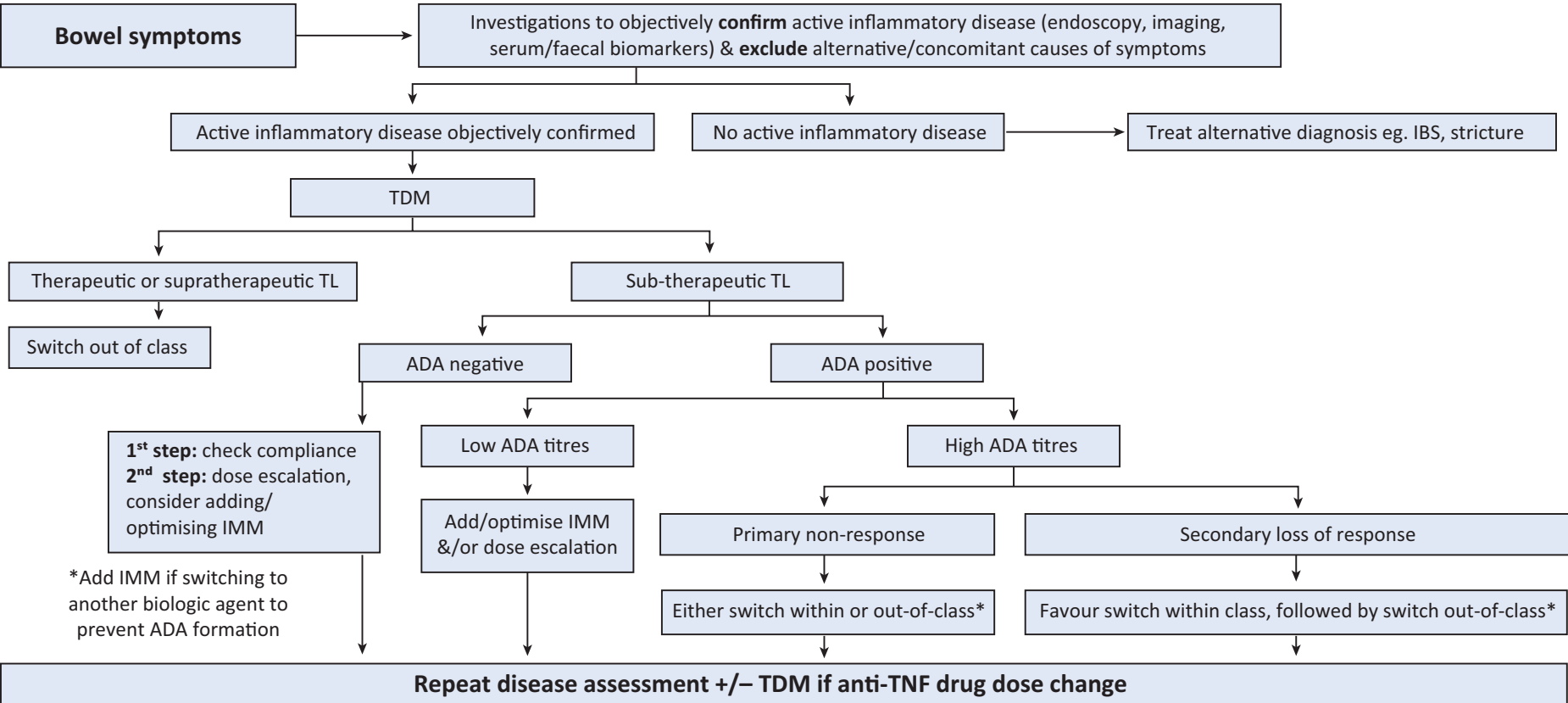
# Algorithms for Therapeutic Drug Monitoring Guided Anti-tumour Necrosis Factor Therapy in Inflammatory Bowel Disease

November 2017

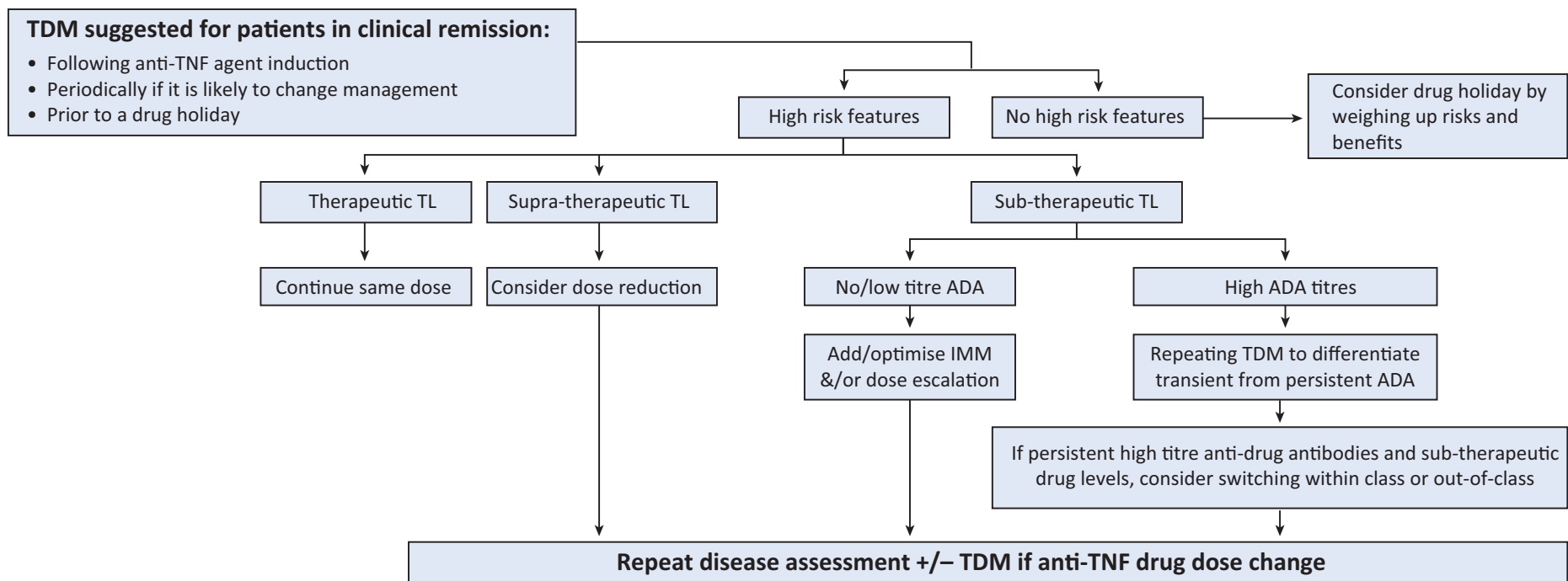
Extract from “Review article: consensus statements on therapeutic drug monitoring of anti-tumour necrosis factor therapy in inflammatory bowel disease”, N. Mitrev et al, Wiley AP&T, 2017 (full article available on [www.gesa.org.au](http://www.gesa.org.au)).

Therapeutic drug monitoring (TDM) guided anti-tumour necrosis factor (anti-TNF) drug therapy in Inflammatory Bowel Disease (IBD) can optimise clinical outcomes and reduce overall treatment cost beyond fixed or clinically guided dosing. Barriers to using TDM for anti-TNF drugs among gastroenterologists include lack of awareness of when to perform testing and how to act on results. This has been addressed this by developing evidence-based consensus statements. The recommendations for interpreting TDM results among patients with active disease on anti-TNF therapy were summarised in an **Algorithm 1**. The recommendations for TDM among patients in clinical remission were summarised in **Algorithm 2**.

**Algorithm 1: Interpreting TDM results in patients with bowel symptoms while on anti-TNF therapy.** (Evidence for this algorithm is mainly in secondary loss-of-response; however, it may also be used to elicit mechanisms of failure and guide treatment decisions in primary non-responders).



**Algorithm 2: Interpreting TDM results in patients in clinical remission while on anti-TNF therapy.** (High-risk features include risk factors for disease relapse as well as risk factors for severe consequences in event of relapse).



**Abbreviations:** ADA: Anti-drug antibodies IBS: Irritable bowel syndrome IMM: Immunomodulator TDM: Therapeutic drug monitoring TL: Trough level

**Committee Members**

Steering committee  
Prof Jane M Andrews  
A/Prof Susan Connor  
Prof Rupert Leong  
Dr Nikola Mitrev  
Dr Greg Moore

**International Panel Members**

Prof Murray Barclay (NZ)  
A/Prof Cynthia Seow (Canada)  
Prof Niels Vande Casteele (USA)

**Gastroenterologists from Australia**

Dr Jakob Begun  
Dr Robert Bryant  
Dr Crispin Corte  
Dr Simon Ghaly  
Dr Viraj Kariyawasam  
Dr Daniel Lemberg  
A/Prof Peter Lewindon  
Dr Reme Mountfield  
A/Prof Graham Radford-Smith  
Dr Miles Sparrow  
Dr Daniel van Langenberg  
Dr Mark Ward

**Australian Panel Members From Other Disciplines**

Prof Jennifer Martin (Clinical Pharmacologist)  
Peter Slobodian (Investigational Drug Pharmacist)  
Dr Catherine Toong (Immunologist)

We acknowledge Prof Michael Grimm and Dr Kannan Venugopal for participating in the 1st and 2nd voting rounds

**Non-voting Attendees**

Fiona Bailey (GESA ex officio)  
Dr Webber Chan  
Gail Foster (Patient Representative)  
Dr Clare Wu

A consensus committee of 22 national and international experts was formed. A literature search aided in the initial drafting of statements. A modified Delphi Method with three iterations was used. Panellists rated their level of agreement with individual statements as: A) agree without reservation, B) agree with minor reservation, C) agree with major reservation, D) disagree with some reservation, E) disagree without reservation, or F) reserved. Statements with ≥80% agreement without or only minor reservation (A+B) at the third voting round were accepted as consensus. Level of evidence (EL) and grades of recommendations (GR) for each statement were determined as per NHMRC recommendations.

Funding information: This study was funded in full by the Gastroenterological Society of Australia (GESA). GESA has previously received unrestricted educational grants from AbbVie, Janssen, Takeda and Pfizer to aid the development of these consensus statements. The funding bodies had no involvement with the consensus process including its membership, design, development of the statements, voting and manuscript writing. N. Mitrev received a GESA research grant for his work on the development of these consensus statements.

# Algorithms for Therapeutic Drug Monitoring Guided Anti-tumour Necrosis Factor Therapy in Inflammatory Bowel Disease

November 2017

Extract from “Review article: consensus statements on therapeutic drug monitoring of anti-tumour necrosis factor therapy in inflammatory bowel disease”, N. Mitrev et al, Wiley AP&T, 2017 (full article available on [www.gesa.org.au](http://www.gesa.org.au)).

## Wall Chart Supplement

