

identified between observed DL and the time of DL testing ( $\rho = -0.3162$ ,  $p = 0.23$ ).

**Conclusion** It is not necessary to use trough DLs when performing ADL TDM for individuals in SCR. This data should give clinicians the confidence to use opportunistic ADL TDM testing in a clinical setting. Further work should be undertaken on non-trough testing of ADL DLs in other clinical scenarios.

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### ANTI-DRUG ANTIBODIES TO INFLIXIMAB: A COMPARISON OF FREE ANTI-DRUG ANTIBODY MEASUREMENT

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**Introduction** Infliximab (IFX) is a biologic drug that inhibits the action of the pro-inflammatory cytokine, TNF $\alpha$ , which is implicated in the pathogenesis of inflammatory bowel disease (IBD).

IFX has revolutionised the care of IBD patients, but response to the drug is not universal. Primary non-response to IFX treatment occurs in up to 30% of IBD patients while up to 46% of patients develop secondary loss of response.<sup>1 2</sup>

Development of anti-drug antibodies (ADAs) against IFX is considered a significant risk factor for the loss of response to treatment, hence the measurement of ADAs as part of therapeutic drug monitoring is an increasingly utilised tool.

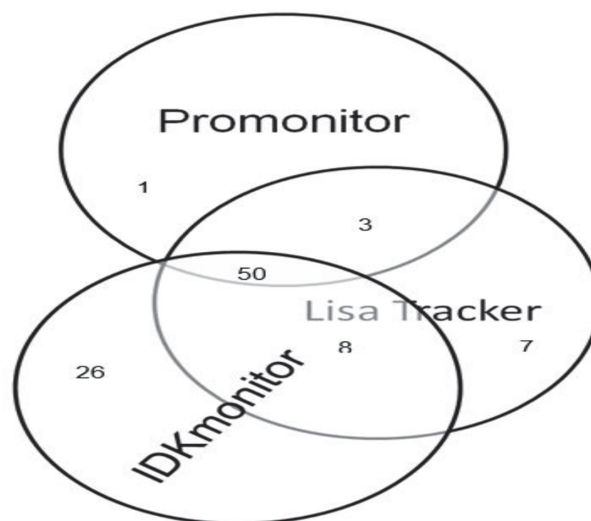
The detection of ADAs varies widely depending on the type of assays used. The aim of this study was to determine the qualitative concordance of three commercially available ELISA kits for measurement of free ADAs to IFX on the Grifols Triturus analyser.

**Methods** 150 patient samples with low IFX drug levels ( $\leq 0.6 \mu\text{g/ml}$ ) were analysed for free ADAs using Promonitor, Lisa Tracker and IDKmonitor kits on the Grifols Triturus automated ELISA analyser.

**Results** Kappa coefficient ( $\kappa$ ) analysis indicated a moderate agreement between the Promonitor and IDKmonitor assays ( $\kappa = 0.484$  (95% CI, 0.357 to 0.611)) and the IDKmonitor and Lisa Tracker assays ( $\kappa = 0.485$  (95% CI, 0.348–0.621)) as well as substantial agreement between the Promonitor and Lisa Tracker assays ( $\kappa = 0.768$  (95% CI, 0.667–0.870)). Figure 1 shows the distribution of samples identified as free ADA positive by each kit.

**Conclusion** Although broad qualitative agreement was found between the three kits, they should not be used interchangeably for patient management.

All kits appear amenable for utilisation in a high-throughput laboratory though a true quantitative comparison between



Abstract P151 Figure 1

these kits was precluded by the absence of any certified reference material for free ADAs to IFX.

Further research is required to estimate the impact of free ADAs on efficiency of IFX treatment and patient management.

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### LOW RATES OF SUBTHERAPEUTIC DRUG LEVELS ARE OBSERVED WITH PROACTIVE THERAPEUTIC DRUG MONITORING OF ADALIMUMAB

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**Introduction** The new BSG IBD guidelines<sup>1</sup> advocate therapeutic drug monitoring (TDM) of adalimumab (ADL) in clinical practice. Testing can be reactive (rTDM) or proactive (pTDM). The most effective strategy remains unclear. Since 2018, a TDM service based at Queen Elizabeth University Hospital, Glasgow, has provided access to TDM testing across Scotland.<sup>2</sup> Additional clinical information collected prospectively at the time of TDM has been used to develop a national TDM database. This study aimed to assess the use of ADL pTDM, examine the DL results observed with ADL pTDM and explore factors associated with results above and below the commonly accepted therapeutic drug level (DL) target of  $5 \mu\text{g/ml}$ .

**Methods** ADL TDM results with available supplementary clinical information performed between 01/01/18–30/09/19 were identified from the TDM database. Sub-analysis was performed for all pTDM test results.

**Results** 1627 ADL TDM tests were identified. pTDM testing accounted for 979(60.1%) tests. Median DL was  $8.7 (<0.4 > 36) \mu\text{g/ml}$ . 789(80.6%) had DL  $> 5 \mu\text{g/ml}$ , 380(38.9%) of these had DL  $> 10 \mu\text{g/ml}$ . 190(19.4%) had low DL result  $< 5$