

BACKGROUND

- Differentiating Intestinal tuberculosis (ITB) from Crohn's disease (CD) remains a significant clinical challenge, particularly in regions where tuberculosis is endemic, due to their overlapping clinical, endoscopic, and histological features. Misdiagnosis can lead to inappropriate treatment and delayed management.
- This study aimed to validate the previously published meta-analysis-based diagnostic model (<https://www.pathology.med.umich.edu/shiny/tbcrohns/>), utilizing clinical presentations, endoscopic findings, and Interferon-Gamma Release Assays (IGRAs) in a prospective, multinational cohort.

MATERIAL & METHODS

- A prospective multicenter study was conducted across seven centers in five Asian countries: Thailand, India, Vietnam, South Korea, and Indonesia.
- A total of 136 patients presenting with ileocolonic ulcers were initially enrolled. After excluding patients with other diagnoses (e.g. bacterial infections or drug-induced ulcers), idiopathic ulcers, or indeterminate/missing IGRA results, a final cohort of 101 patients was validated. This cohort comprised 57 patients with CD and 44 patients with ITB.
- The study compared the diagnostic performance of two scoring models: a model based solely on clinical and endoscopic findings (CE score) and a model incorporating IGRA into the clinical and endoscopic parameters (CEI score).
- Both models calculated the probability of ITB. Performance was assessed using the Area Under the Receiver Operating Characteristic (ROC) curve.

RESULTS

- Baseline characteristics revealed that CD patients were significantly more likely to be male (59.7% vs 36.4%, $p=0.02$) and present with perianal disease (15.8% vs 2.3%, $p=0.02$) and extraintestinal manifestations (10.5% vs 0%, $p=0.02$). Conversely, ITB patients had significantly higher rates of pulmonary involvement (23.2% vs 1.8%, $p<0.001$) and ascites (11.6% vs 1.7%, $p=0.03$).
- Endoscopically, longitudinal ulcers, cobblestone appearance, and rectal involvement were significantly more common in CD, while transverse ulcers were seen in both groups without significant difference. IGRA was positive in 75% of ITB and 31.6% of CD ($p<0.001$).

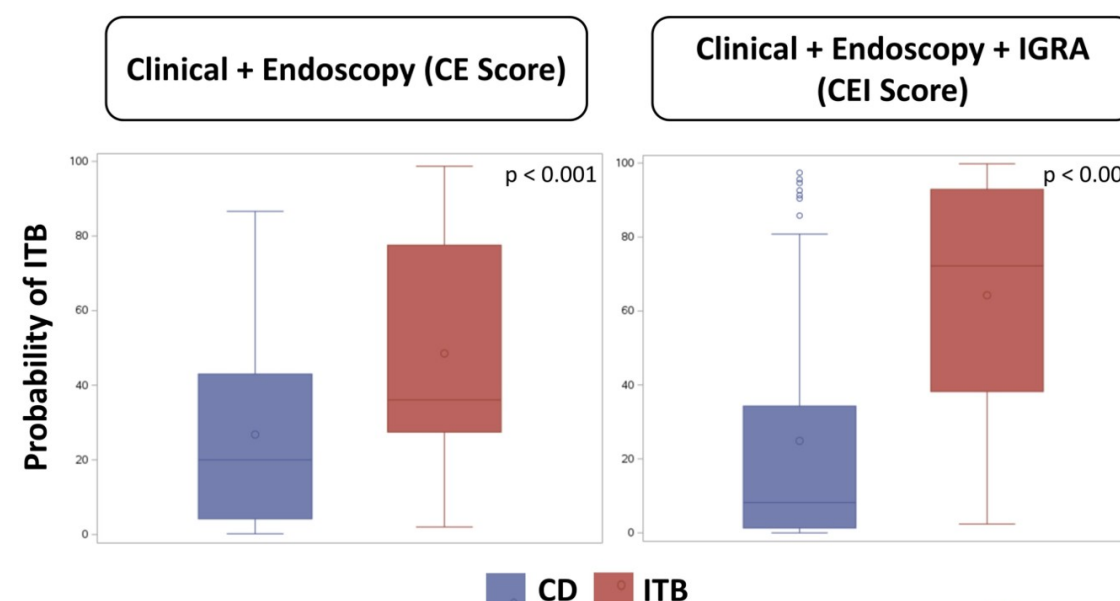


Figure 1

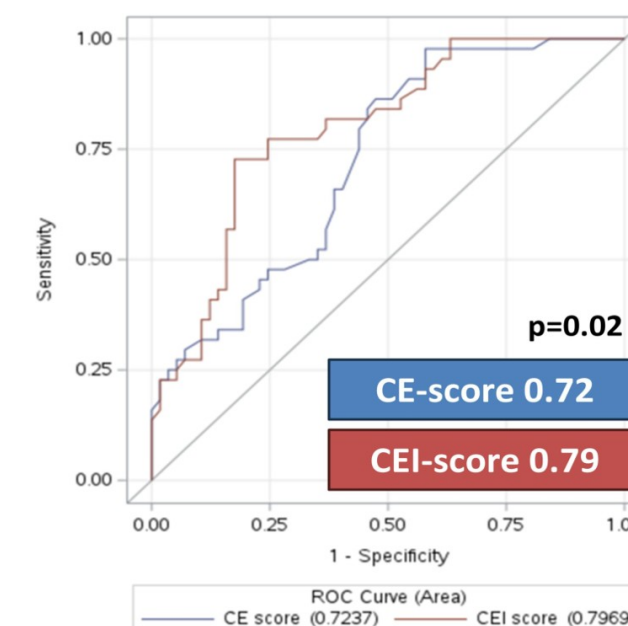


Figure 2

- Notably, 17.5% of CD patients were initially misdiagnosed as ITB and received anti-TB therapy. In the validation analysis, both the CE score and the CEI score were significantly different between the two groups (Figure 1). The CEI score demonstrated superior diagnostic performance with an AUC of 0.7969 compared to the CE score's AUC of 0.7237. The addition of IGRA significantly improved the model's accuracy (Contrast estimate: 0.0732, $p=0.0280$) (Figure 2).

SUMMARY / CONCLUSION

- The integration of IGRA into a diagnostic model utilizing clinical and endoscopic findings significantly improves the ability to differentiate Intestinal tuberculosis from Crohn's disease compared to clinical and endoscopic features alone in this multinational multicenter study.

