

**שם: ערן זיתן**

**שם העבודה:**

## **Development and Validation of a New Endoscopy Score for Inflammatory Bowel Disease (IBD), The TIGER score**

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### **Abstract**

#### **Background:**

Endoscopic scoring systems in inflammatory bowel disease (IBD) are necessary for standardized reporting of mucosal appearance in IBD patients as part of clinical practice and clinical studies.

Several endoscopic scoring systems have been developed to evaluate Crohn's disease (CD) and Ulcerative colitis (UC) activity.

The main weakness of commonly used indices is their lack of ability to provide meaningful information such as the number of segments with moderate to severe mucosal involvement. Also, studies have shown that the existing endoscopic scoring systems generate low inter-observer agreement. More than that, for some of these scores, a systemic review has demonstrated they are incompletely validated; suggesting that future research is required to determine the operating properties and to define the optimal index.

Another drawback of the current endoscopic scoring systems is the fact that different indices are used for the different forms of IBD, which does not only complicate the task of endoscopic evaluation but is also inaccurate as nowadays the different IBD forms are considered to be part of a continuous scale rather than distinct forms that should be evaluated separately.

#### **Aims:**

The aim of this study is to develop and validate an advanced endoscopic score that will resolve some of the weaknesses commonly used scoring systems may have.

#### **Methods:**

**Phase I** – a developmental stage during which a total of 100 segments (50 of CD and 50 of UC patients) will be reviewed through video in order to create a new endoscopic score prototype.

**Phase 2** – a pilot study during which the new endoscopic score prototype will be established. Three IBD specialists will review and grade, each, a total of 40 (20 CD +20 UC patients) ileocolonoscopy videos. Inter- and intra-reviewer variation will be quantified as well as agreement between the developed prototype and the SES-CD/Mayo scores.

### **Phase 3** – the validation stage:

Three IBD specialists will review and grade, each, a total of 60 (30 CD +30 UC patients) ileocolonoscopy videos. Inter- and intra-reviewer variation will be quantified as well as agreement between the developed prototype and the SES-CD/Mayo scores. An evaluation of the usability of the new score will be done using a set of questionnaires assessing its ease of use and satisfaction by reviewers.

### **Study importance:**

This new scoring method will provide additional and crucial information that could not be conveyed using the commonly used endoscopic scores mainly, disease burden: number of segment with a severe mucosal involvement. This in effect describes the degree of disease extent, information that needs to be reflected easily in the final score. Moreover, this new endoscopic score will be unique in a way that it could be used for all IBD patients regardless of disease type.