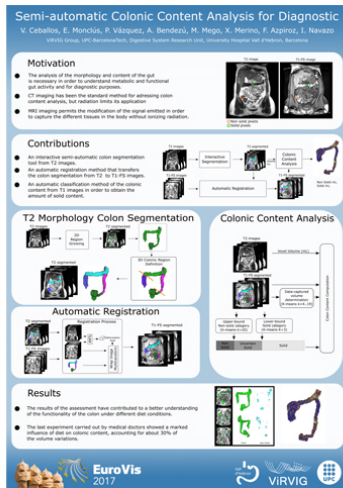


Semi-automatic Colonic Content Analysis for Diagnostic

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The analysis of the morphology and content of the gut is necessary in order to understand metabolic and functional gut activity and for diagnostic purposes. Magnetic resonance imaging (MRI) has become an important modality technique since it is able to visualize soft tissues using no ionizing radiation, and hence removes the need for any contrast agents. In the last few years, MRI of gastrointestinal function has advanced substantially, although scarcely any publication has been devoted to the analysis of the colon content. This paper presents a semi-automatic segmentation tool for the quantitative assessment of the

unprepared colon from MRI images. This application has allowed for the analysis of the colon content in various clinical experiments. The results of the assessment have contributed to a better understanding of the functionality of the colon under different diet conditions. The last experiment carried out by medical doctors showed a marked influence of diet on colonic content, accounting for about 30% of the volume variations.