TO THE EDITOR: In chronic inflammatory diseases, uncontrolled inflammation is associated with increased rates of hospitalization, complications, and death. Because of the potential severity of these conditions, there is an increased demand for new diagnostic approaches.\(^1,2\) Multispectral optoacoustic tomography (MSOT) is a new imaging technique that permits the noninvasive quantification of hemoglobin-dependent tissue perfusion and oxygenation as surrogates of inflammation.\(^3\) This approach uses the excitation of short-pulsed laser light with near-infrared wavelengths to induce the photoacoustic effect in targeted tissues, which results in detectable sound waves induced by thermoelastic expansion.

In this single-center, cross-sectional diagnostic study (ClinicalTrials.gov number, NCT02622139), MSOT Acuity Echo (iThera Medical) was used to perform transabdominal evaluation of intestinal inflammation in 108 patients with Crohn’s disease in 108 patients with Crohn’s disease in...
ease (Fig. 1A; also see Table S1 and Fig. S1 in the Supplementary Appendix and the protocol, available with the full text of this letter at NEJM.org). We compared the distribution of MSOT measurements between patients with active Crohn’s disease and those with nonactive disease, which was determined on the basis of clinical scoring (Harvey–Bradshaw index), endoscopic scoring (Harvey–Bradshaw index), and laboratory data.
that MSOT-based assessment of hemoglobin levels in the intestinal wall has the potential to be used to distinguish active disease from remission in patients with Crohn's disease without the need for more invasive procedures; further study is needed.

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