### 281 Evaluating a Diagnostic Algorithm for Adult Appendicitis – A Quality Improvement Project

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**Introduction:** Diagnosing appendicitis remains challenging, despite being the most common surgical emergency. We conducted a single-centre mixed method quality improvement project to assess the validity of a diagnostic algorithm for appendicitis and the diagnostic impact of increasing cross-sectional imaging during the Covid-19 pandemic.

**Method:** Adult histology reports and preoperative imaging data were retrospectively retrieved for patients operated on between 1/7/19-31/12/19 ('baseline data') and an appendicitis diagnostic algorithm was developed.

Imaging and risk stratification data were prospectively collected, as part of a national audit, between 20/03/30-23/6/20 for all adult appendicitis patients. This data was used to evaluate the efficacy of the proposed diagnostic algorithm.

Use of imaging and histological diagnoses was compared between datasets.

**Results:** 194 patients were included across both time periods. The rate of cross-sectional imaging increased from 36.6% to 76% and the normal appendicectomy rate (NAR) decreased from 5.22% to 2.4%. Thirty-six percent of patients in the latter time period were not managed in accordance with the proposed algorithm. The proposed diagnostic algorithm may have prevented up to 87.5% of normal appendicectomies across both time periods.

**Conclusions:** Increasing cross-sectional imaging was associated with a decrease in the NAR. The use of the proposed diagnostic algorithm may have reduced the NAR further.