

Assessing the Quality of CT Reporting in Suspected Appendicitis: In-sourcing vs Out sourcing

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Background:

Roughly 30% of all surgical emergencies who come through the emergency department presenting with an acute abdomen are diagnosed with acute appendicitis. CT scans have been very useful in the diagnosis of said condition given its high predictive value. A recent paper from Howlett et al 2015 [1] stated that there is a higher discrepancy rate when using outsourcing services compared to insourcing

Standard:

1. The degree of clinicopathological correlation between the pre-appendicectomy CT report and the post-appendicectomy histopathology reports should be sufficient.
2. The number of removed appendices that are histologically normal should be acceptably low.

Indicator:

1. Number of CT Scans with confirmed CT appendicitis
 2. Numbers of which were confirmed histologically as either normal appendices, or acute appendicitis
- Target: The positive predictive value should be >92% [2]

Methodology:

A search was performed for the last 100 cases for the keyword appendicitis. The reports which had a diagnosis of acute appendicitis were used. They were split into two groups i.e. in-house reports or Medica. The histology reports were reviewed retrospectively and compared to their CT.

Results:

There were 48 histology reports for those who has CT proven appendicitis. The positive predictive value for in house reports were 77% compared to 96% from Medica

Discussion:

The results were promising for the Medica reports and unlike the paper suggests, their reports have a low discrepancy rate when comparing to the histology. Thus this should be fed back to the surgeons who may be concerned that the Medica reports were sub par in comparison. With regards to the low PPV for the in house reports this will be fed back to the department. However, a larger sample size is needed for more accurate correlation.

References:

1. Howlett, D., Drinkwater, K., Frost, C., Higginson, A., Ball, C. and Maskell, G. (2017). Re: The accuracy of emergency abdominal CT in adult patients who present with non-traumatic abdominal pain: results of a UK national audit. A reply. *Clinical Radiology*, 72(10), p.897.
2. Dude, J.B., Lynch, M.L., Bhatt, S., Dogra, V.S., 2012. Computed Tomography Mimics of Acute Appendicitis: Predictors of Appendiceal Disease Confirmed at Pathology. *J Clin Imaging Sci*, 2(73), pp.1-8.-6.