

SUPPLEMENTARY MATERIAL

Appendix S1 Strategy for Electronic Searches of Databases: MEDLINE (U.S. National Library of Medicine) and Cochrane Central Register of Controlled Trials (Cochrane Library)

| Search details | Medline - Time Period: - February 2019 | Results |
|----------------|---|---------|
| 1 | (Crohn's disease OR CD OR inflammatory bowel disease OR IBD) AND (magnetic resonance imaging OR MRI OR magnetic resonance enterography OR MRE) AND (diagnostic accuracy OR sensitivity OR specificity) | 805 |
| 2 | (Crohn's disease OR CD OR inflammatory bowel disease OR IBD) AND (magnetic resonance imaging OR MRI OR magnetic resonance enterography OR MRE) AND layered pattern | 7 |
| 3 | (Crohn's disease OR CD OR inflammatory bowel disease OR IBD) AND (magnetic resonance imaging OR MRI OR magnetic resonance enterography OR MRE) AND (active inflammation OR active disease) | 323 |
| 4 | (Crohn's disease OR CD OR inflammatory bowel disease OR IBD) AND (magnetic resonance imaging OR MRI OR magnetic resonance enterography OR MRE) AND fibrosis | 142 |
| 5 | (magnetic resonance imaging OR MRI OR magnetic resonance enterography OR MRE) AND layered pattern AND (sensitivity OR specificity OR diagnostic accuracy) | 12 |
| Search details | Cochrane Central Register of Controlled Trials Time Period: - February 2019 | Results |
| 1 | Inflammatory bowel disease and MRI and specificity and sensitivity | 2 |
| 2 | Inflammatory bowel disease and Crohn's disease and layered pattern | 2 |
| 3 | Crohn's disease and MRI and inflammation and fibrosis | 2 |
| 4 | Layered pattern and inflammation | 10 |
| 5 | Crohn's disease and MRI | 45 |
| 6 | Inflammatory bowel disease and MRI | 22 |
| 7 | Crohn's disease and MRI and diagnostic accuracy | 11 |

Appendix S2 Articles That Were Excluded After Review of the Full Text (Including Abstracts) and Reasons for Exclusion

| First Author | Year of Publication | Journal | Reasons for exclusion |
|----------------------------|---------------------|-----------------------|---|
| Wagner ^[24] | 2018 | JCC | Insufficient data to (re)construct a 2x2 contingency table. |
| Iannicelli ^[25] | 2016 | Clin. Imaging | Insufficient data to (re)construct a 2x2 contingency table |
| Rimola ^[12] | 2015 | Am. J. Gastroenterol. | Data were analyzed per bowel segments, insufficient data to (re)construct a 2x2 contingency table |
| Spieler ^[26] | 2013 | Clinical Radiology | Data were analyzed per bowel segments, insufficient data to (re)construct a 2x2 contingency table |
| Tielbeek ^[8] | 2013 | Eur. Rad. | Insufficient data to (re)construct a 2x2 contingency table |
| Macarini ^[27] | 2012 | Radiol. Med. | Different outcome, insufficient data to (re)construct a 2x2 contingency table |
| Malagò ^[28] | 2012 | Radiol. Med. | Different outcome, insufficient data to (re)construct a 2x2 contingency table |
| Lasocki ^[29] | 2011 | JMIRO | Insufficient data to (re)construct a 2x2 contingency table |
| Oto ^[30] | 2011 | JMRI | Insufficient data to (re)construct a 2x2 contingency table |
| Parisinos ^[31] | 2010 | Inflamm. Bowel Dis. | Insufficient data to (re)construct a 2x2 contingency table |
| Punwani ^[9] | 2009 | Radiology | Data were analyzed per bowel segments, insufficient data to (re)construct a 2x2 contingency table |
| Malagò ^[32] | 2008 | Abdominal Imaging | Insufficient data to (re)construct a 2x2 contingency table |

Appendix S3: customized QUADAS-2 detailed results of the included studies

| First Author [Reference No.] | Year | Journal | RISK OF BIAS | | | | | | | | | APPLICABILITY CONCERNS | | | | Total Score | Total No. of Applicable Items | % of Total Applicable |
|---------------------------------|------|----------------------|-------------------|--------|--------|---------------|-----------------------|--------|-----------------|--------|--------|------------------------|----------------------|---------------|-----------------------|----------------|-------------------------------------|--------------------------|
| | | | Patient Selection | | | Index Test | Reference Standard | | Flow and Timing | | | | Patient Selection | Index Test | Reference Standard | | | |
| | | | Item 1 | Item 2 | Item 3 | Item 4 | Item 5 | Item 6 | Item 7 | Item 8 | Item 9 | Item 10 | Item 11 | Item 12 | Item 13 | | | |
| | | | | | | | | | | | | | | | | | | |
| Del Vescovo ^[19] | 2008 | Abdom Imaging | 1 | 0 | 0 | 1 | 1 | 0.5 | 0.5 | 1 | 1 | 0.5 | 0 | 1 | 1 | 8.5 | 13 | 65 |
| Grieser ^[18] | 2012 | J Crohns Colitis | 1 | 1 | 1 | 1 | 1 | 0.5 | 1 | 1 | 1 | 0.5 | 1 | 1 | 1 | 12 | 13 | 92 |
| Koh ^[10] | 2001 | AJR | 1 | 1 | 1 | 1 | 1 | 0.5 | 1 | 1 | 1 | 0.5 | 1 | 1 | 1 | 12 | 13 | 92 |
| Quaia ^[17] | 2014 | Acad Radiol | 1 | 1 | 1 | 1 | 1 | 0.5 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 11.5 | 13 | 88 |
| Zappa ^[11] | 2011 | Inflamm Bowel Dis | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 12 | 13 | 92 |