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# Mucinous appendiceal neoplasms – is right colon resection necessary?

Appendiceal neoplasms are rare and often show low-grade histologic features. Symptoms and signs related to peritoneal metastases most commonly results in a diagnosis. Historically, epithelial appendiceal neoplasms have routinely been treated by a right colectomy. However, three institutions have determined that with mucinous appendiceal neoplasms with peritoneal spread, right colon resection with ileocolic lymph node dissection did not confer a survival advantage over appendectomy alone. Currently, the treatment of choice in patients with a low histological grade of tumor, referred to as disseminated peritoneal adenomucinosis (DPAM), has been changed to appendectomy only. However, confusion still exists for the high-grade mucinous neoplasms, referred to as peritoneal mucinous carcinoma (PMCA). This manuscript provides precise data to guide the selection of a surgical procedure for mucinous appendiceal neoplasms with PMCA.

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|---|---|
| **Total number of PMCA with complete cytoreduction** | **299** |
| **Number with positive lymph nodes** | **52 (17%)** |
| **Well differentiated PMCA with positive lymph nodes** | **3/44 (6.89%)** |
| **Moderately differentiated PMCA with positive lymph nodes** | **6/107 (0.056%)** |
| **Poorly differentiated PMCA with positive lymph nodes** | **43/148 (29%)** |

Tab. 1. Lymph node involvement with appendix mucinous neoplasms.

From our database which included 299 PMCA patients, the three grades of appendiceal mucinous adenocarcinoma were determined. There were 44 (14.7%) well differentiated PMCA peritoneal metastases patients, 107 (35.8%) moderately differentiated PMCA peritoneal metastases patients, and 148 (49.5%) poorly differentiated PMCA peritoneal metastases patients.

Within these three grades of mucinous adenocarcinoma the incidence of positive lymph nodes was determined (Tab. 1). In the 44 well differentiated PMCA group there were 3 with positive lymph nodes (6.8%). In the 107 moderately differentiated PMCA group there were 6 with positive lymph nodes (5.6%). In the 148 poorly differentiated PMCA group there were 43 with positive lymph nodes (29%).

From these data, the algorithm proposed for the surgical options is shown in Figure 1. For mucinous appendiceal neoplasms with DPAM histology and peritoneal metastases, the treatment is CRS with appendectomy and HIPEC. The same recommendation is made for PMCA histology if peritoneal metastases histology shows well or moderately differentiated neoplasms. For PMCA histology with peritoneal metastases showing poorly differentiated appendiceal mucinous neoplasms or intestinal

type (non-mucinous) neoplasms, a right colon resection with regional lymph node dissection is needed.

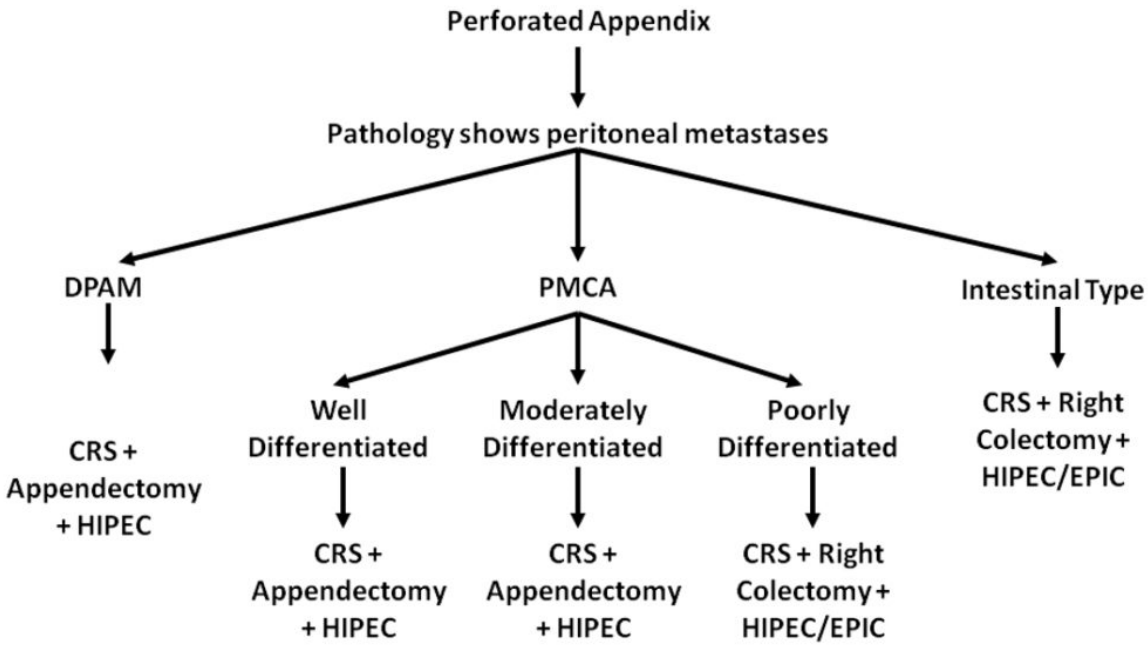


Fig. 1. Proposed algorithm for management of perforated appendiceal epithelial neoplasm.

*Conclusions*
There is a low incidence (6%) of positive lymph nodes in patients with low or moderately differentiated PMCA. With high-grade disease, lymph node invasion increased to 29%. Right colectomy is indicated in patients with high-grade PMCA.

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## Publication

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