

Neoplasia I: Benign and malignant neoplasms in glandular epithelium and mesenchyme
Answers:

Q1 What is the significance of the occurrence of adenocarcinoma within an adenoma?

A1 The adenoma is the precursor, part of which develops into the adenocarcinoma (adenoma-adenocarcinoma sequence). However, most adenomas do not progress to adenocarcinomas, this only occurs in a small proportion of adenomas after many years.

Q2 What do you think is the most significant difference in the behaviour of adenomas and adenocarcinomas?

A2 The adenoma is non-invasive (benign), whereas the adenocarcinoma is invasive (malignant) as it has infiltrated through the muscularis mucosae into the main part of the bowel wall (submucosa and muscularis propria).

Q3 What do you understand by the term moderately differentiated adenocarcinoma?

A3 Moderately differentiated describes the "grade" of the cancer in terms of how well or poorly it resembles the parent tissue (the range of appearances includes well differentiated [close resemblance], moderately differentiated, poorly differentiated [poor resemblance] and anaplastic [uncertain parent tissue as the cancer shows little evidence of differentiation]). Adenocarcinoma refers to a malignant invasive cancer (-carcinoma) of glandular epithelial origin (adeno-).

Q4 Which features in this section would help you in predicting the behaviour of this neoplasm?

A4 Grade (or degree of differentiation) – see above & stage (how far it has spread through the bowel wall and into lymph nodes or to liver – Dukes' staging system).

Q5 What are the routes of spread of metastasising adenocarcinoma of the large intestine?

A5 Lymphatic spread to lymph vessels and lymph nodes. Haematogenous spread into blood vessels (through the portal vein) to the liver and from there to the rest of the body (e.g. lungs). Transcoelomic spread if the cancer breaches the serosal surface of the bowel it can spread to form many tumour nodules studded over the peritoneal surface throughout the abdomen.

Q6 Why is there necrosis within the tumour deposit?

A6 Fast growth of the tumour outstrips the growth of the vascular supply leading to ischaemic areas which undergo necrosis.