Perforation (Core)

Perforation through the tumour into the peritoneal cavity is a well-established adverse prognostic factor in colonic[1] and rectal[2] cancer and should be recorded. Tumour perforation is defined as a macroscopically visible full thickness defect through the tumour, such that the bowel lumen within the segment involved by tumour is in communication with the external surface of the resection specimen or with the lumen of another organ. Such cases are regarded as pT4a in the Union for International Cancer Control (UICC)/American Joint Committee on Cancer (AJCC) 8th edition Staging Systems.[3,4] The term perforation should be reserved for the biological setting and, for clarity, different descriptive terminology applied should a full thickness defect in the specimen arise intra-operatively. Such clinical information should be conveyed to the reporting pathologist to assist pathological interpretation. If an iatrogenic full thickness defect in the tumour occurs whilst the specimen is in situ within the abdominal cavity, this is best regarded as pT4a disease, given the risk of tumour seeding the peritoneal cavity. This interpretation is however offered without good evidence. If such an iatrogenic defect occurs once the specimen is outside the abdominal cavity, the defect should not influence pT classification. An explanatory note regarding interpretation should be provided in the pathology report.

Peritumoural abscess cavity, for example within the mesentery, that is contained and does not demonstrate breach of the serosal surface, should not be considered perforation and is considered pT3 rather than pT4a. Perforation of the colon as a result of a more distal obstructing tumour is distinct from tumour perforation and does not indicate pT4 disease, but nevertheless should be recorded as it is associated with high mortality risk.

References

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4 Amin MB, Edge SB, Greene FL, Byrd DR, Brookland RK, Washington MK, Gershenwald JE, Compton CC, Hess KR, Sullivan DC, Jessup JM, Brierley JD, Gaspar LE, Schilsky RL, Balch CM, Winchester DP, Asare EA, Madera M, Gress DM and Meyer LR (eds) (2017). *AJCC Cancer Staging Manual. 8th ed.*, Springer, New York.