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Commentary

The Stage and Classifications of Colon Cancer

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DESCRIPTION

The American Joint Committee on Cancer (AJCC) Tumor/Node/Metastasis (TNM) classification and staging system is used to classify and stage colon cancer. According to this concept, stages are determined by the traits of the Primary Tumour (T), the degree of Local Lymph Node Involvement (N), and the presence of distant metastasis (M). Additionally, the preoperative clinical assessment (c) or the pathologic examination of metastatic tissue may be used to characterise metastasis clinically or pathologically.

Definition of distant metastasis (M)

The TNM system does not recognise the phrases pM0 and Mx as acceptable categories. The M category for clinical classification might be assigned as cM0, cM1, or pM1. The pathological stage grouping can be used with any of the categories (cM0, CM1, or pM1).

Staging information

- In spite of fewer positive nodes, elements of updated staging in the 8th edition of the AJCC staging manual give more weight to the depth of invasion's unfavourable prognostic qualities.
- T4 is separated into direct gross adhesion to nearby tissues and penetration to the visceral peritoneum's surface.
- Depending on how many nodes are affected, stage IIIC of T1-2N2 is downstaged to either IIIA or IIIB.
- Change IIIB to IIIC for T4bN1
- Separate T4/N1/N2
- Staging for the problem of mesenteric deposits where nodal tissue cannot be seen is resolved
- Stage IIC has been added to the revised staging of stage II based on the depth of the invasion.
- Node number-based revised substaging of stage III (N1a-1 node, N1b-2-3 nodes, N2a-4-6 nodes, and N2b-7 or more nodes)
- Division of metastases to one or more places in acknowledgment of the prospect of curing a single site of metastatic illness with aggressive treatment.
- To illustrate the dismal prognosis of peritoneal carcinomatosis, stage M1c has been introduced.
- Nodal micro metastases (Tumour clusters less than 0.2 mm in diameter) are now considered positive according to meta-analysis findings that show these individuals have a dismal prognosis.
- Equal weight is given to other tumour deposits in the peritoneum, subserosa, and mesentery.

Although they have not yet been included in the official stage criteria, the following elements are crucial in determining treatment choices:

- Carcinoembryonic antigen (CEA) levels in preoperative serum
- A score for tumour regression that takes into account both the circumferential margin for rectal cancer and the pathologic response to preoperative chemotherapy, chemoradiotherapy, radiation, or chemobiologic therapy.
- Perineural invasion and lymphovascular invasion
- Microsatellite Instability (MSI), which denotes a lack of mismatch repair enzymes and both predicts and prognoses a failure to respond to fluoropyrimidine therapy in the adjuvant situation.
- KRAS, NRAS, and BRAF mutation status, as these genes' mutations are linked to a lack of responsiveness to treatments that target epidermal growth factor receptors.

Definition of regional lymph nodes (N)

- NX- It is impossible to evaluate regional lymph nodes.
- N0- There is no localised lymph node metastasis
- N1- Any number of tumour deposits or metastasis to one to three regional lymph nodes (tumour in lymph nodes measuring less than 0.2 mm) are present, and all detectable nodes are negative.
- N1a-1-Regional lymph node metastatic
- N1b- Metastasis in a couple of local lymph nodes
- N1c- Tumour deposit(s) without regional nodal metastases in the subserosa, mesentery, or nonperitonealized, pericolic, or perirectal/mesorectal tissues
- N2- 4- or more-lymph node metastatic disease

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• N2a- 4- to 6-regional lymph node metastatic disease

• N2b- Metastatic disease in seven or more local lymph nodes