Concordance of Rectal Cancer with MRI and Histology

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Objective

- **Primary objective** - Retrospective review of assessing the diagnostic accuracy of MRI in local T and N staging of rectal cancer in patients undergoing primary surgery with final histopathological staging.
- **Secondary Objective** - Evaluate the preoperative staging after MDT discussions

Method

- **Sample set -** Patients histologically diagnosed with rectal carcinoma between January 2016 to July 2019, undergoing definitive surgery as the primary treatment.
- A comparison was made between the T and N staging from MRI, review of T and N staging in the MDT, and the final histo pathological staging using simple concordance.

Results

- Total of 66 patients with rectal cancer were included in the study with mean age 63 years. Tumors were located in the lower rectum in 33%, mid-rectum in 46%, and upper rectum in 21% of the cases.
  1) **Concordance of MRI and MDT staging: 1)** total 77%, 2) T staging 47% 3) N staging 53%
  2) **Concordance of MRI and histopathological staging** : 1) Total 42 % 2) T staging 43% 3) N staging 57%
  3) **Concordance between MDT outcome and histopathological staging**. 1) Total 42% 2) T staging 47% 3) N staging 53%

Summary

- Concordance for T staging:→ increased from 43% with MRI to 47% following MDT
- In contrast the concordance for N staging :→reduced from 57% with MRI to 53% following MDT. Furthermore, the
- Initial MRI T stage was under staged in 29% of patients when compared with histology, but this reduced to 20% following MDT
- Initial MRI N stage was under staged in 21% of patients with histology, but this increased to 40% after MDT.

Conclusions

- MDT has a beneficial role in reviewing preoperative MRI staging of rectal cancers.
- N staging did not appear to benefit from MDT review, possibly a result of small sample size.
- MDT underestimated the nodal size.
- Early diagnosis and accurate preoperative staging are necessary to properly implement the neoadjuvant treatment protocol, and accurate radiologic imaging is essential for this.