

373 A Review of Microsatellite Instability (MSI) Testing: Real World Clinical Data

C. Harris, I. McCallum, S. Mills

Northumbria Health Care NHS trust, Newcastle, United Kingdom

Introduction: Colorectal cancers (CRC) are the second most common cause of death by cancer, in the UK. Microsatellite instability (MSI) analysis is novel yet important part of managing CRC and used as a tool for predicting prognosis, treatment and identifying lynch syndrome. Where lynch syndrome is identified, preventative screening can be utilised. Previous studies only focused tumour testing on high-risk cases.

Method: A retrospective study at Northumbria Health Care NHS Trust was performed on all new CRC patients between 2017-2020.

Results: A total of 965 patients with CRC were identified. After exclusion criteria was applied to the cohort, a total of 483 patients were identified as having undergone MSI analysis. The mean age was 73.5 years old, with the female to male ratio being 1:1.4. Patients were further grouped into MSI stable, low, and high. MSI High patients accounted for 10% of patients analysed. Further genetic testing was performed on these patients which highlighted 28 patients with BRAF positive genes who went on to screening for Lynch syndrome associated cancers.

Conclusions: MSI testing provides essential diagnostic, prognostic information and also guides treatment options. 2.9% of patients identified as high risk for familial cancers and went on to have genetic screening and surveillance.