



The Reclassification of Hyperplastic Polyps to Sessile Serrated Lesions

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Introduction

Sessile serrated lesions (SSL) are a classification of precursor colorectal cancer (CRC) polyps that are a part of the serrated neoplasia pathway [1].

The 2019 WHO Classification categorised premalignant serrated lesions for CRC into three main categories: Hyperplastic polyps (HP), SSL and Traditional serrated adenoma (TSA) [2]. HP have little to no risk of malignancy compared to SSLs that are an under and misdiagnosed premalignant lesion.

Reviewing old cases provides education and continued professional development amongst BMS reporters and pathologists.

Aims

To review all HP reported in 2018 by SATH Pathology department using the 2019 WHO classification criteria and identify associated patient and polyp factors.

Methods

Demographic and clinical data for each HP reported in 2018 was extracted. The slides were then reviewed and classified using the current 2019 WHO criteria, **Table 1**.

Table 1: 2019 WHO diagnostic criteria for SSL & HPs.

HP	SSL
<ul style="list-style-type: none"> •Serrations limited to the surface epithelium •Proliferation zones limited to crypt bases •No basal dilation 	<ul style="list-style-type: none"> •Serrations down to the basal layer •Lateral branching along the muscularis mucosa •Basal crypt dilation

Results

Table 2: The number of polyps that remained HP, reclassified as SSL or other, after histological review, in relation to their size (<5mm, 5-9mm, ≥10mm).

Size (mm)	HP	SSL	Other	Total
<5	121	53	0	174
5-9	71	82	5	158
≥10	4	27	0	31

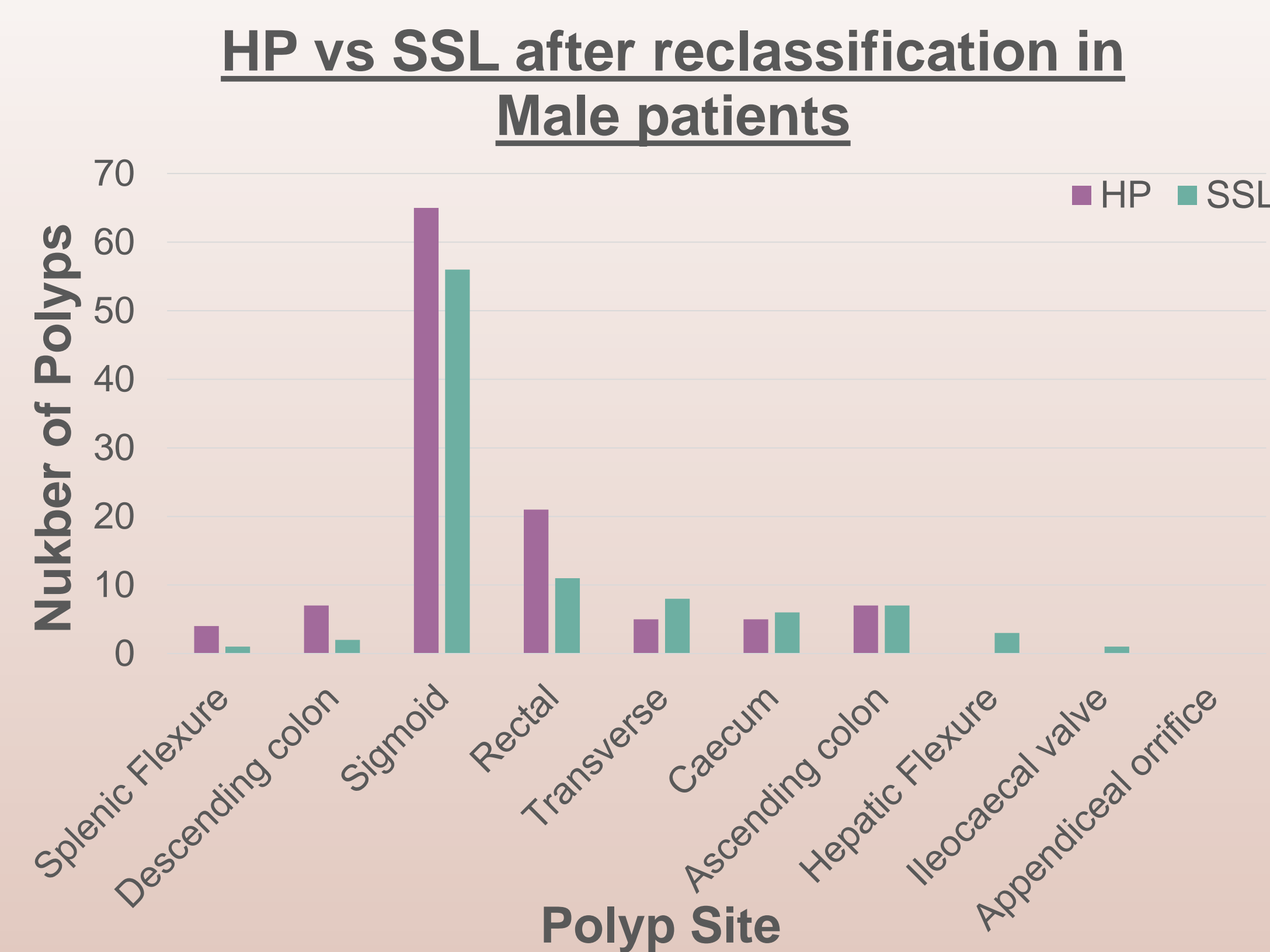
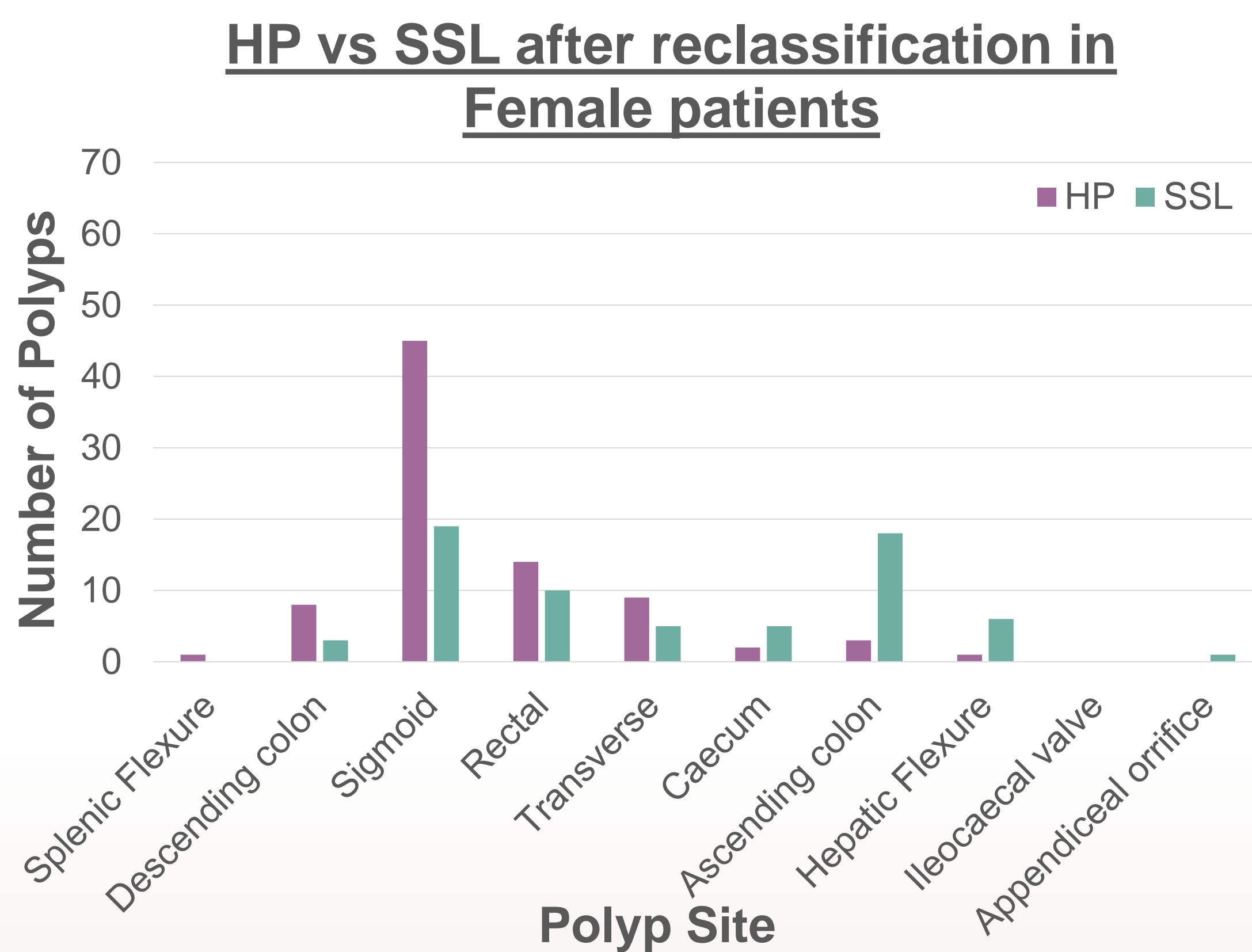


Figure 2: Classification after histological review in relation to site and gender. There were 153 and 211 polyps from female and male patients, respectively.

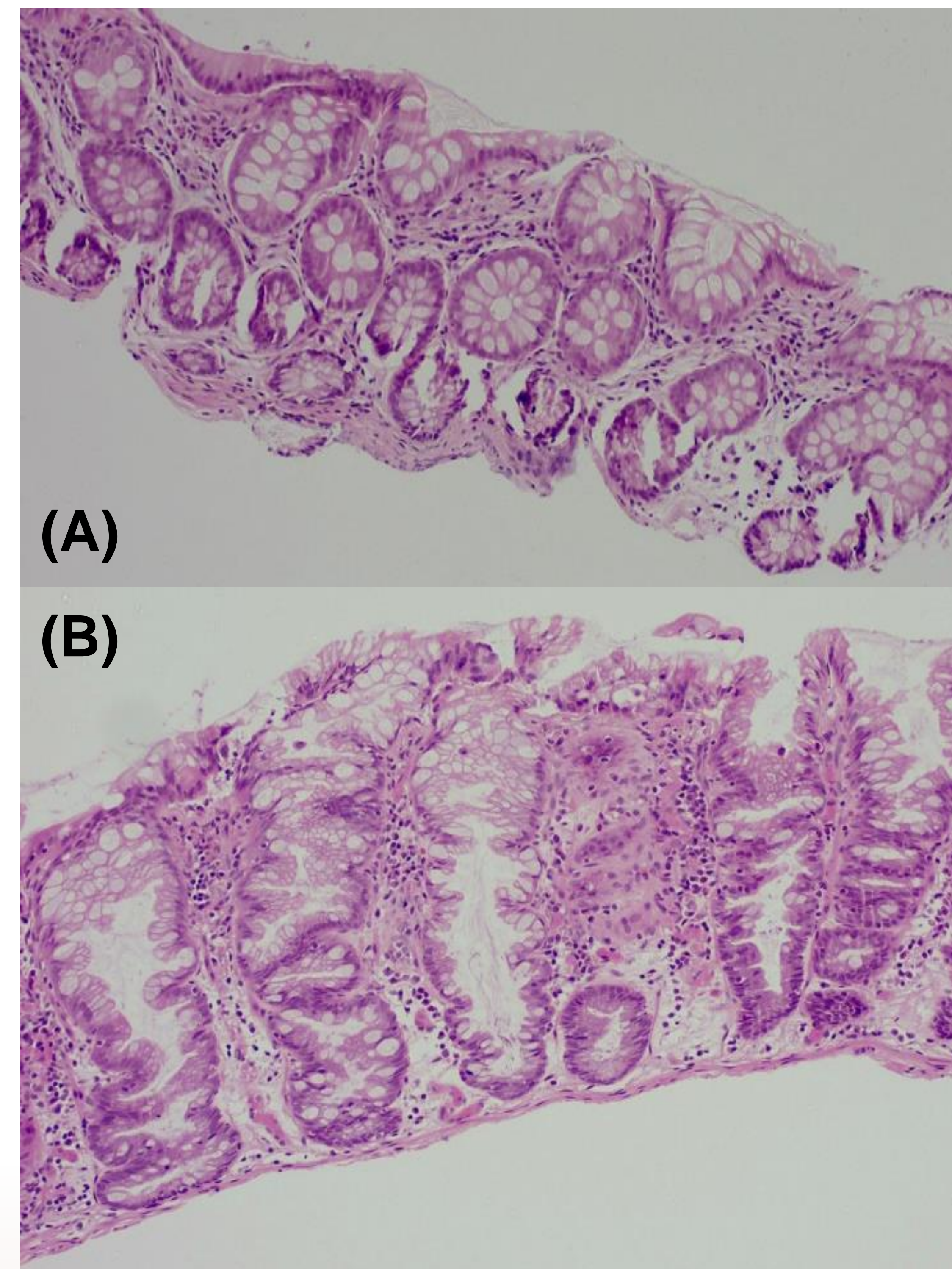


Figure 1: (Magnification x40). (A) Section taken at level 3 displaying features of a HP. (B) Deeper section at level 6 is an SSL with lateral branching along the muscularis mucosa and serrations extending deep into the crypts

364 polyps met the inclusion criteria, 197 (54.1%) remained HP, 162 (44.5%) reclassified as SSL, and 5 (1.4%) reclassified as other. The majority of reclassified SSLs were >5mm.. Polyps <5mm remained largely HP **Table 2**.

Microscopic images were taken as an illustrative narrative of results. Deeper microtomy sections can reveal SSL characteristics, **Figure 1**. Female reclassification occurred predominantly from the ascending (11.8%) and sigmoid colon (12.4%) compared to male reclassification occurring primarily in the sigmoid colon (26.5%) **Figure 2**.

Conclusion

Out of 364 HP, a significant amount were reclassified SSLs. Reported rates of reclassification range from 2.6% to 85% in studies dating from 2007 to 2019 [3].

In literature, SSL are predominantly located in the colon proximally and HP distally [4]. Due to the design of this study, most reviewed polyps were located distally. Polyps from the sigmoid colon had the highest reclassification rate. Despite the large number reclassified, majority of HP remained distally, supporting that SSL are located more proximal. This does not remove the potentiality of distal SSL.

There is an equal gender distribution with regard to reclassification. In some studies, there is an unreproducible female bias.

From the reclassified SSL, 67% were >5mm with most polyps <5mm remaining HP. This data agrees with current literature which emphasises sizes >5mm suggestive of SSL and <5mm suggestive of HP. However, it can be argued with 33% of reclassified SSL being <5mm it is not significant enough to suggest that polyp size should be used as a predictor of reclassification.

Following education on SSL diagnosis and training BMS GI reporters, a reaudit on recent SSL and HP reporting will be performed.

References

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[3] Jaravaza, D.R. and Rigby, J.M. (2020) "Hyperplastic polyp or sessile serrated lesion? the contribution of serial sections to reclassification," *Diagnostic Pathology*, 15(1). Doi: 10.1186/s13000-020-01057-0.

[4] Ding, C.-K.C. and Wen, K.W. (2022) *Serrated lesions, Pathology Outlines - Serrated lesions*. Pathology Outlines Inc. Available at: <https://www.pathologyoutlines.com/topic/colonserratedlesions.html> (Accessed: September 19, 2022).