



# Submucosal Lipoma and Sessile Serrated Adenoma/Polyp, More Than Just a Coincidence?

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## Background

In our practice we noticed that sessile serrated adenomas/polyps (SSA/P) were frequently associated with submucosal lipomas (SL). While this finding has been reported by other experts, it is unclear if this phenomenon represents anecdotal association between SSA/P and SL or a distinct form of an epithelial and mesenchymal interaction.

## Aims

The aim of this study was to examine the prevalence of SL in association with SSA/P.

## Methods

We searched our database for patients with the histologic diagnosis of SSA/P, including those with low and high grade cytological dysplasia. We included 357 consecutive cases diagnosed between January 2011 and July 2011. We reviewed the pathology reports and the H&E stained sections for each patient and collected the following data from the pathology report: age and gender of the patient, and the number, size and location of the SSA(s). The total number of SSA/P identified were 436 (cecum and ascending colon: 249, transverse: 153 and left colon: 34).

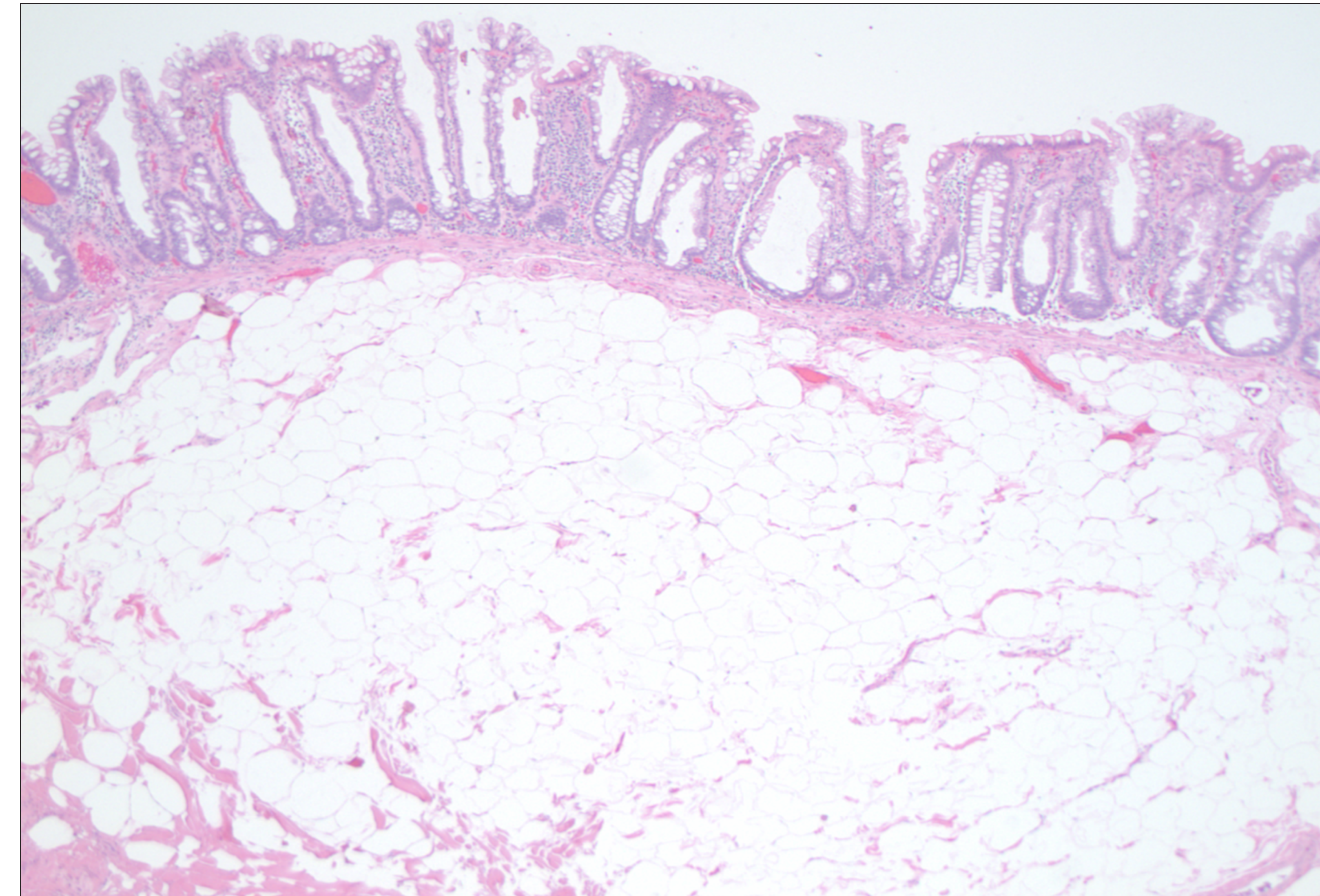


Figure 1 – Sessile Serrated Adenoma/Polyp with Submucosal Lipoma.

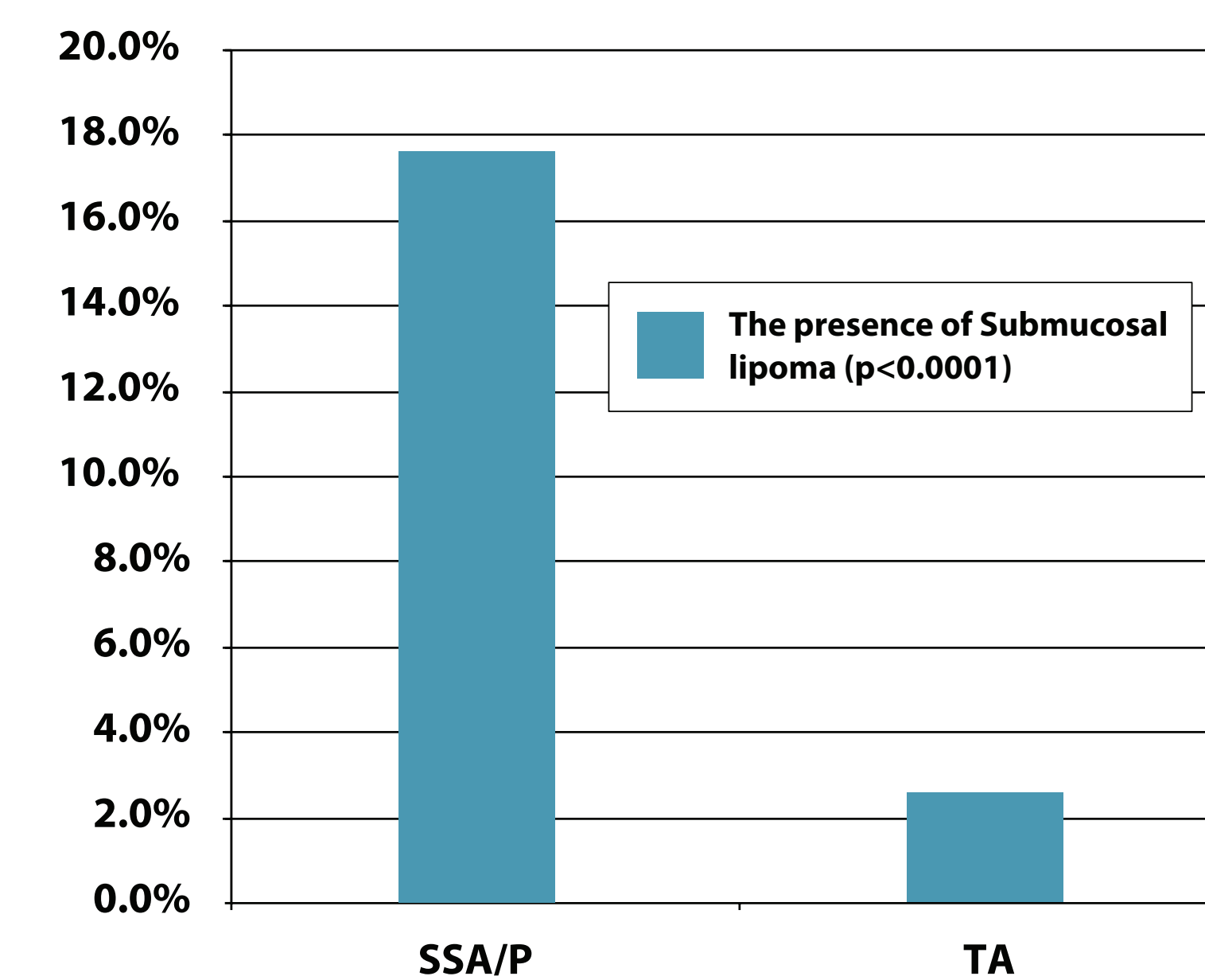


Figure 2 – The prevalence of submucosal lipoma in Sessile Serrated Adenoma/Polyp (SSA/P) and Tubular Adenoma (TA)

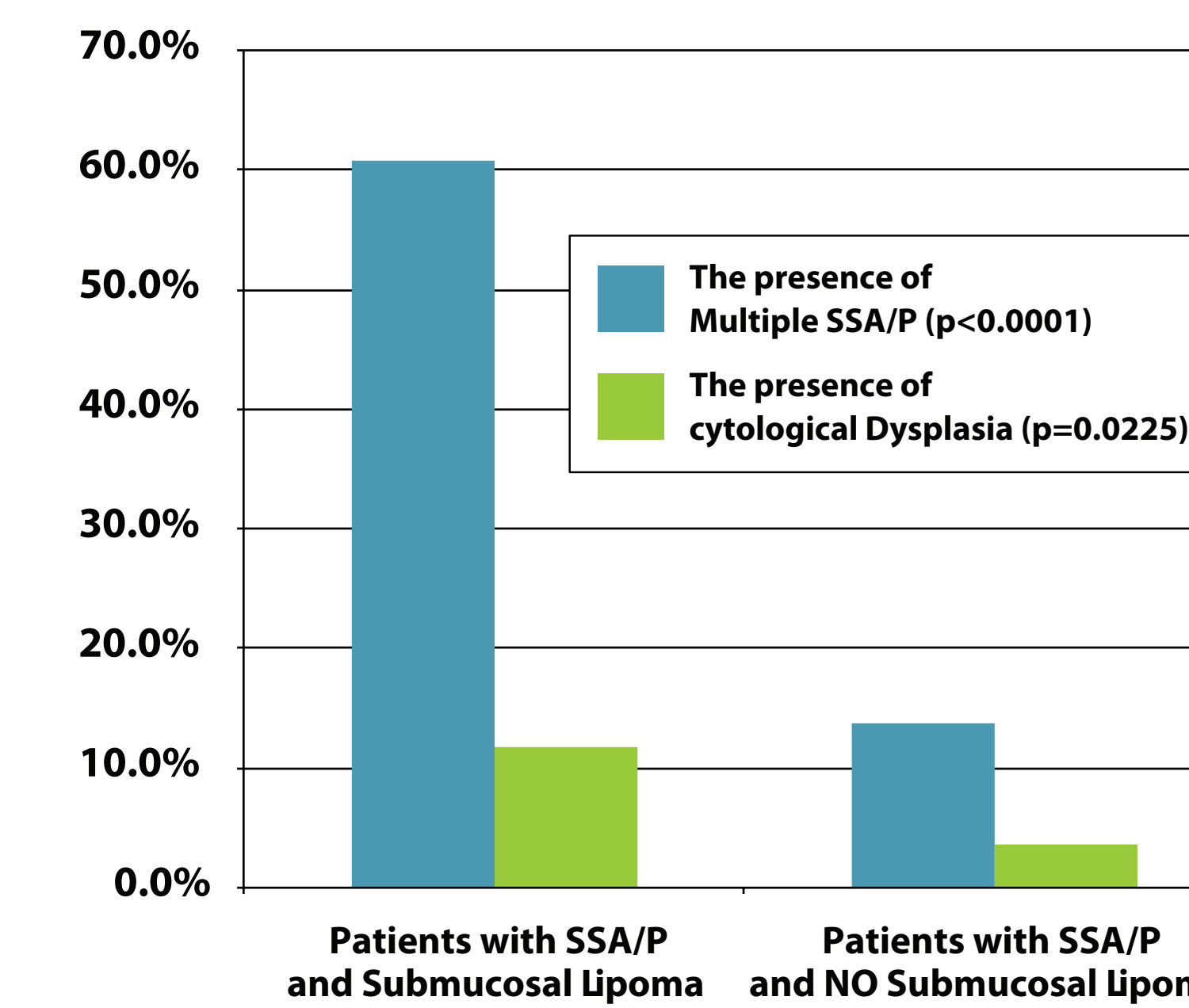


Figure 3 – The presence of multiple Sessile Serrated Adenoma/Polyp (SSA/P) and cytological dysplasia in patients with and without submucosal lipoma.

## Methods

For control population, the database was searched for patients with the histologic diagnosis of tubular adenoma (TA) diagnosed between January 2011 and July 2011. For each patient, the pathology report and the H&E stained sections were reviewed and the following data was collected from the report: age and gender of the patient, and the number, size, location and configuration (sessile vs pedunculated) of TA(s). We included 445 consecutive TA(s) that were sessile and larger than 8mm (cecum and ascending colon: 250, transverse: 160 left colon: 35).

All the histological sections were evaluated for the presence of submucosal adipose tissue and assigned a score of 0 (no adipose tissue present), 1 (focal adipose tissue present without formation of a distinct lipoma), or 2 (a well-circumscribed collection of adipose tissue replacing the normal submucosal structures). Only cases that were graded as 2 were considered positive for SL.

## Results

SL was identified in 77 SSA/P obtained from 51 patients. The prevalence of SL in SSA/P (77/ 436, 17.7%) was higher than that seen with TA, (12/446, 2.7%) with  $p < 0.0001$ . Among patients with SSA/P, those with SL showed higher prevalence of multiple SSA (31 /51, 60.7%) as compared to those that did not show SL (42 /306, 13.7%) with  $p < 0.0001$ . They also had higher prevalence of cytological dysplasia (6/51, 11.8%) as compared to those that did not show SL (11 /306, 3.6%) with  $p = 0.0225$ .

## Study Highlights

There is a high prevalence of SL with SSA/P. Additionally, patients with SSA/P and SL are more likely to have multiple SSA/P and SSA/P with cytological dysplasia.