The traditional serrated adenoma (TSA) is a rare polyp of the serrated neoplasia pathway (0.9% of colorectal polyps). Similar to the sessile serrated adenoma (SSA), they progress through a phase of overt cytological dysplasia before the development of malignancy. Two molecular subtypes are recognised, namely \( \textit{BRAF} \) and \( \textit{KRAS} \) mutated. \( \textit{BRAF} \) mutated TSAs arise in SSAs or hyperplastic polyps whereas \( \textit{KRAS} \) mutated TSAs have no known precursor. Both give rise to aggressive molecular subtypes of colorectal carcinoma.

**Definition:** A neoplastic polyp characterised by eosinophilic cells, ectopic crypt formations and slit-like epithelial serrations.

**Risk factors:** Older age

**Clinicopathological features:** Mean age 62, predominantly distal, mean size 10.6mm, distal polyps are more likely to be protuberant, whereas proximal polyps are often flat

**Molecular biology:** \( \textit{BRAF} \) mutation (67%), \( \textit{KRAS} \) mutation (22%)

**Risk of malignant progression:** High

**Risk of metachronous carcinoma:** High; odds ratio 4.84; risk of carcinoma at ten years 4.5%

**Surveillance guidelines:** Surveillance colonoscopy is recommended at 3 years.

**Note:** At present there are no guideline to direct surveillance in TSAs with superimposed cytological dysplasia. In our experience these are very aggressive polyps and require complete removal with close surveillance.
**Cancer outcome**: TSAs can give rise to two major molecular subtypes of carcinoma:

1. **BRAF** mutated, microsatellite stable carcinoma – this is the most aggressive molecular subtype of colorectal adenocarcinoma
2. **KRAS** mutated, microsatellite stable carcinoma – this is also an aggressive subtype of colorectal adenocarcinoma

**Further reading:**

Bettington et al; A clinicopathological and molecular analysis of 200 traditional serrated adenomas. Modern Pathology 2015;48:414-427

Rune et al; Increased risk of colorectal cancer development among patients with serrated polyps. Gastroenterology 2015, epub ahead of print.