

Pattern of invasion (Recommended)

Reason/Evidentiary Support

It is controversial as to whether the pattern of invasion in stage 1 mucinous ovarian carcinoma has prognostic significance.¹⁻⁶ The expansile/confluent/non-destructive pattern of invasion is characterised by architecturally complex glands, cysts or papillae lined by atypical epithelium with minimal to no intervening stroma. The destructive/infiltrative pattern is characterised by haphazardly arranged glands, tubules, nests and cords of malignant cells infiltrating stroma with an associated oedematous, inflammatory or desmoplastic response. While several studies have shown the expansile pattern to herald a better prognosis, a recent population-based registry study of mucinous ovarian carcinomas was not able to prognosticate based on the distinction between the two patterns of invasion.¹⁻⁶ It is recommended that the pattern of invasion in mucinous ovarian carcinomas be recorded.

References:

- 1 Rodríguez IM, Prat J (2002). Mucinous tumors of the ovary: a clinicopathologic analysis of 75 borderline tumors (of intestinal type) and carcinomas. *Am J Surg Pathol*. 26:139-152.
- 2 Lee KR, Scully RE (2000). Mucinous tumors of the ovary: a clinicopathologic study of 196 borderline tumors (of intestinal type) and carcinomas, including an evaluation of 11 cases with 'pseudomyxoma peritonei'. *Am J Surg Pathol* 24:1447-1446.
- 3 Nomura K, Aizawa S (2000). Noninvasive, microinvasive, and invasive mucinous carcinomas of the ovary: a clinicopathologic analysis of 40 cases. *Cancer* 89:1541-1546.
- 4 Chen S, Leitao MM, Tornos C, Soslow RA (2005). Invasion patterns in stage I endometrioid and mucinous ovarian carcinomas: a clinicopathologic analysis emphasizing favorable outcomes in carcinomas without destructive stromal invasion and the occasional malignant course of carcinomas with limited destructive stromal invasion. *Mod Pathol* 18:903-911.
- 5 Ludwick C, Gilks CB, Miller D, Yaziji H, Clement PB (2005). Aggressive behavior of stage I ovarian mucinous tumors lacking extensive infiltrative invasion: a report of four cases and review of the literature. *Int J Gynecol Pathol* 24:205-217.
- 6 Tabrizi AD, Kalloger SE, Köbel M, Cipollone J, Roskelley CD, Mehl E, Gilks CB (2010). Primary ovarian mucinous carcinoma of intestinal type: significance of pattern of invasion and immunohistochemical expression profile in a series of 31 cases. *Int J Gynecol Pathol* 29:99-10.