Introduction/Background Malignant bowel obstruction (MBO) is common in advanced ovarian cancer (AOC). Surgery and chemotherapy are of limited benefit for most patients who present with diffuse peritoneal, platinum-refractory disease. Home parenteral nutrition (HPN) may improve survival and quality of life. Little is known about which radiological features correlate with survival, to support clinical decision-making in this patient group.

Methodology Two radiologists undertook independent retrospective reviews of Computed Tomography (CT) findings of 63 patients with high-grade AOC and MBO admitted to a single tertiary centre, supported with parenteral nutrition between April 2019 and December 2021. Predefined radiological parameters associated with MBO were assessed for all patients. Multivariate analysis incorporating clinical prognostic factors were performed using Cox proportional hazards, identifying which radiological features correlate with poorer life expectancy.

Results Median survival was 95 days (24–470 days), with 6 patients alive at data-lock. 70% patients presented with platinum-resistant disease, 17% treatment naïve. Most patients presented with small bowel obstruction (n=41). 43% had no obstruction transition point, 22% presented without bowel dilatation, 35% with no change to bowel wall calibre.

Radiological features correlating with poor survival on multivariate analysis were large bowel obstruction (HR 7.29, p=0.007), presence of solid abdominal visceral metastasis (HR 2.89, p=0.008) and largest bulk of disease >5 cm (HR 3.14, p=0.033). Features that did not correlate with survival were functional vs mechanical obstruction, bowel dilatation, bowel wall thickening or thinning, presence of mesenteric disease, ascites or pleural effusion.

Conclusion Aetiology of MBO in AOC, whether functional or mechanical, single-site, or multilevel, does not correlate with survival. Large bowel involvement, presence of bulky disease and solid abdominal visceral metastasis may be useful radiological markers of poor prognosis to support clinical decision-making when considering HPN.