Objectives Development of ovarian metastasis (OM) during the course of primary breast cancer (PBC) is uncommon and associated with poor prognosis. The objective of this study is to review the characteristic clinical and imaging features of OM from PBC.

Methods A retrospective study of nine patients treated in our institution, who had documented OM from breast carcinoma between 2005 and 2020.

Results At the time of PBC diagnosis, the mean age was 44 (range 31–64). In five cases, the PBC was unilateral. Histological subtypes were invasive ductal carcinoma in five patients and invasive lobular carcinoma in four patients. ER and PR were positive in eight cases. HER2 was positive in two cases. Five patients had locally advanced breast carcinoma. Four patients had synchronous ovarian metastases. Only three patients underwent breast surgery. Main symptoms of OM were pelvic pain and abdominal distension. An elevated CA 125 level was found in seven cases while CA 15–3 level was increased in eight cases. In four cases, pulmo-nary and bone metastases were simultaneously diagnosed with OM occurrence. All patients underwent ovarian surgery. Seven patients had bilateral OM. Ascites and peritoneal carcinomatosis were seen respectively in six and three patients. Time to occurrence of OM after PBC was a median of 25 months. The median follow-up period after OM assessment was 18 months.

Conclusions The evaluation of ovarian lesion years after breast cancer is challenging and rise the possibility of a metastatic lesion. Imaging, serum tumor markers and histology may provide valuable tools in the assessment of ambiguous cases.