

PROGNOSIS UNIT

Survival in Breast Cancer with Bone Metastasis with and without skeletal event

Objectives:

To assess the validity and applicability of an article attempting to predict the prognosis associated with a given condition. These include:

Acquire the skills necessary to appraise the methodology of a cohort study examining an issue of prognosis.

Determine how information from a prognosis study can be incorporated into clinical reasoning.

Assignment:

1. Read the attached scenario.
2. Read the attached guidelines for reading articles concerning prognosis.
3. Critically appraise the attached article using the accompanying worksheet.
4. Describe how you would address the student's questions about prognosis taking into account your review of the article.

Clinical Scenario:

You are an intern rotating on a rehab service and are caring for a 68 year old woman who has been admitted status post reduction and internal fixation of a proximal femoral fracture secondary to recently diagnosed metastatic breast cancer initially staged as localized. She has a past history of mild hypertension. Her daughter is concerned about her mother prognosis considering the diagnosis of breast cancer with bone metastases.

You ask your student to use the PICO format to identify key components of the clinical question that will guide a search, noting that for questions of prognosis the "I" (for intervention) may be replaced with a prognostic factor.

Patient / population / problem: outpatient with breast cancer

Intervention / exposure / prognostic factor: femoral fracture due to bone metastasis

Comparison: NA (specification of a comparison adds no useful information to the PICO framework)

Outcome: survival

Ultimately, you and your medical student formulate the following clinical question: In patients with breast cancer and bone metastasis, is skeletal involvement associated with decreased survival? You elect to search for a cohort study to answer this question. You search clinical queries in PubMed filtering for prognosis (narrow). You type in the most important components of your question: “survival”, “bone metastases” and “breast cancer”. You identify an article published in 2011 that provides the answer to your question. The team plans to discuss the paper in the next day’s morning report.

Below is a detailed description of the search strategy.

Search strategy

(Prognosis/Narrow[filter]) AND ("breast cancer"[Title/Abstract] OR "Breast Neoplasms"[Majr]) AND survival[Title/Abstract] AND "bone metastases"[Title/Abstract]

The team discusses several things about the two different search processes:

1. The search used the key words from PICO to drive the search
2. The use of clinical queries within PubMed facilitated a quick search for cohort studies under Prognosis/Narrow.
3. Because a key concept is “breast cancer” which is a MESH heading, we searched not only for those exact words targeting the title and the abstract of the paper but also for the subject heading, selecting it as a major topic.

Enclosed Materials:

1. Guyatt G, Drummond R. *User’s Guides to the Medical Literature: A Manual for Evidence Based Clinical Practice*, 3rd Edition (JAMA). New York, NY: The McGraw-Hill Companies, Inc, 2015. Prognosis
2. Yong M, Jensen A, Jacobsen J et al. Survival in breast cancer patients with bone metastases and skeletal-related events: a population-based cohort study in Denmark (1999–2007). *Breast Cancer Res Treat* (2011) 129:495–503.
3. Worksheet for evaluating an article on prognosis.