Results: Survey about Bone Marrow Exams

Bonnie L. King, Ph.D., Instructor, Stanford University School of Medicine
Deborah Collyar, President, Patient Advocates in Research (PAIR)

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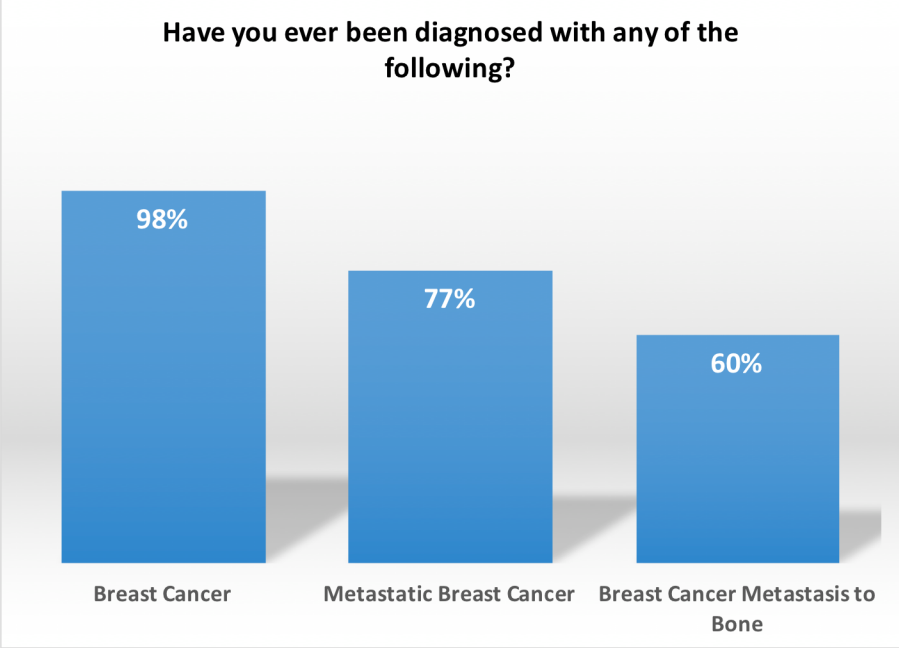
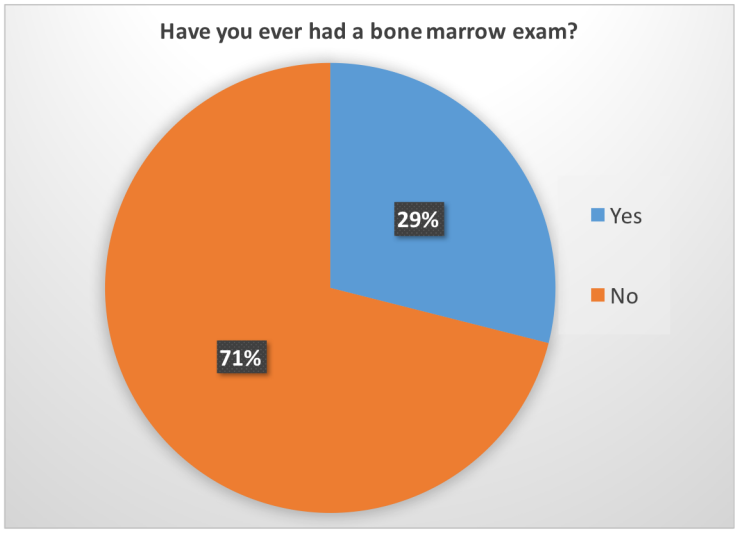
Background and Approach: Clinical bone marrow exams (aspiration and biopsy) are sometimes performed to learn if cancer cells have spread to the bone. Studying cells and fluids collected by bone marrow exams could help us develop approaches to prevent and treat breast cancer metastasis. To explore the potential acceptance of bone marrow exams as a research tool, we developed an exploratory survey to examine breast cancer patient experience with, and attitudes toward, bone marrow exams. The survey was circulated to breast cancer patients and survivors via the METAvivor Foundation email list.

Results: Surveys were completed by 190 people. Key findings included:

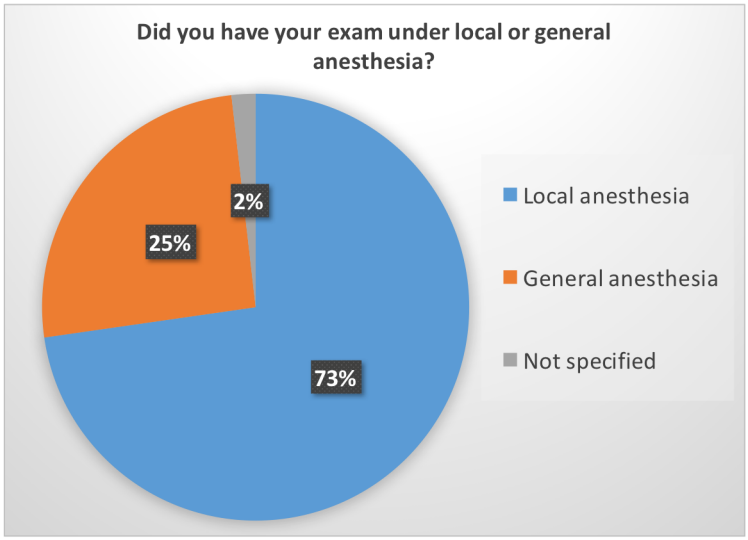
- Most respondents (98%) had a previous diagnosis of breast cancer.
  - About 3 in 4 respondents (77%) had a diagnosis of metastatic breast cancer.
  - Over half of them (60%) had a diagnosis of breast cancer metastasis to bone.



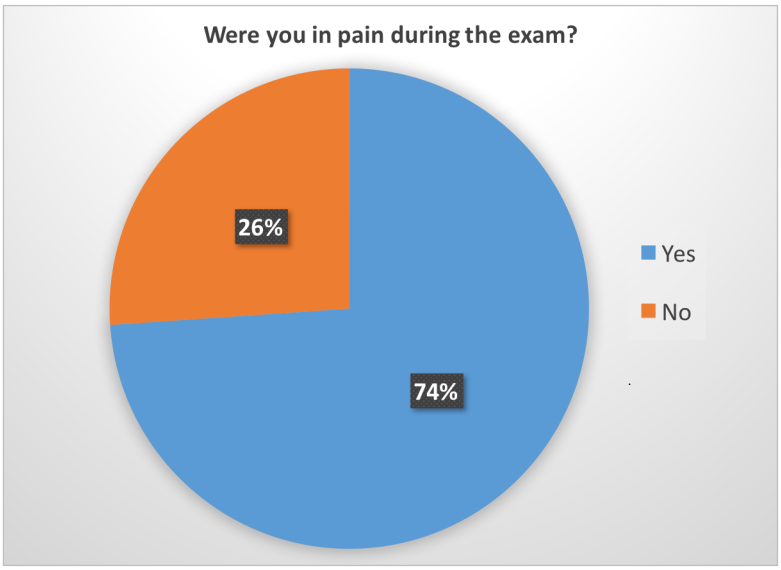
- About 3 in 10 (29%) people said they had a bone marrow exam.



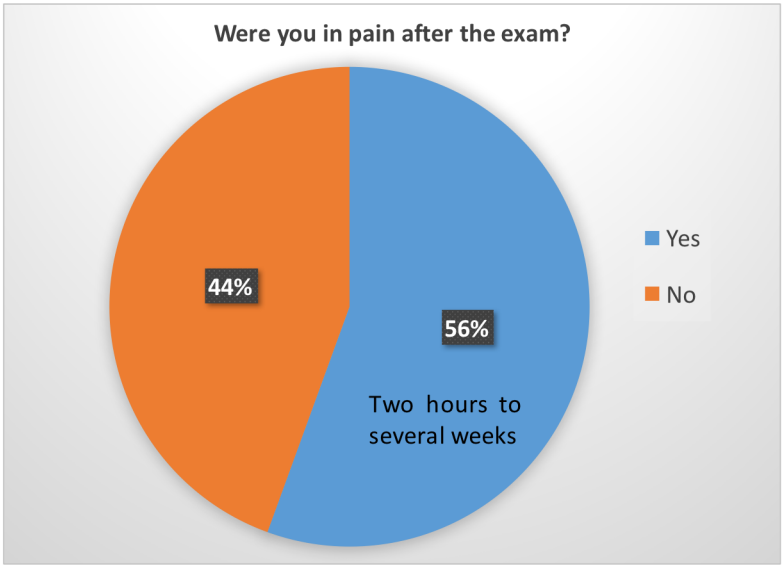
- Out of those who had an exam, 3 of 4 exams were performed under local (73%) vs. general (25%) anesthesia.



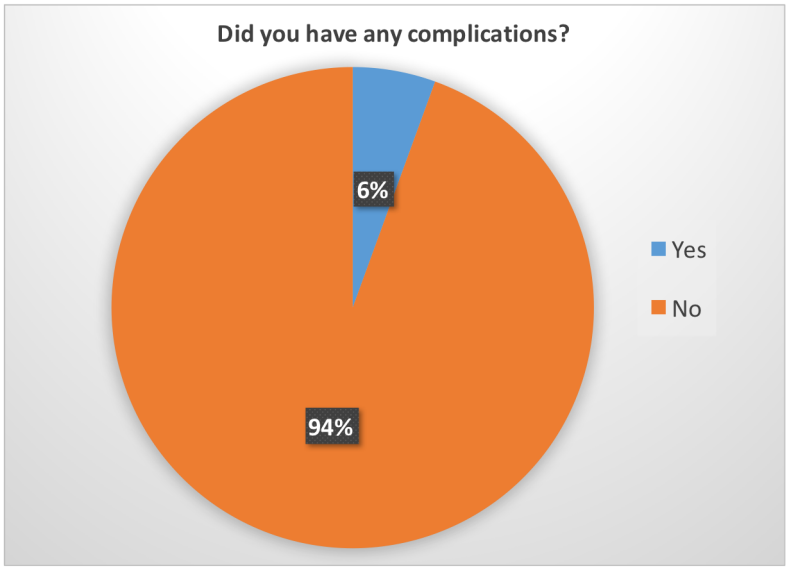
Among those who had the procedure under local anesthesia, 3 in 4 people (74%) reported being in pain during the exam.



- A little more than half (56%) of all people who had a bone marrow exam (under local or general anesthesia) reported being in pain after the exam. Their pain lasted from 2 hours to several weeks.

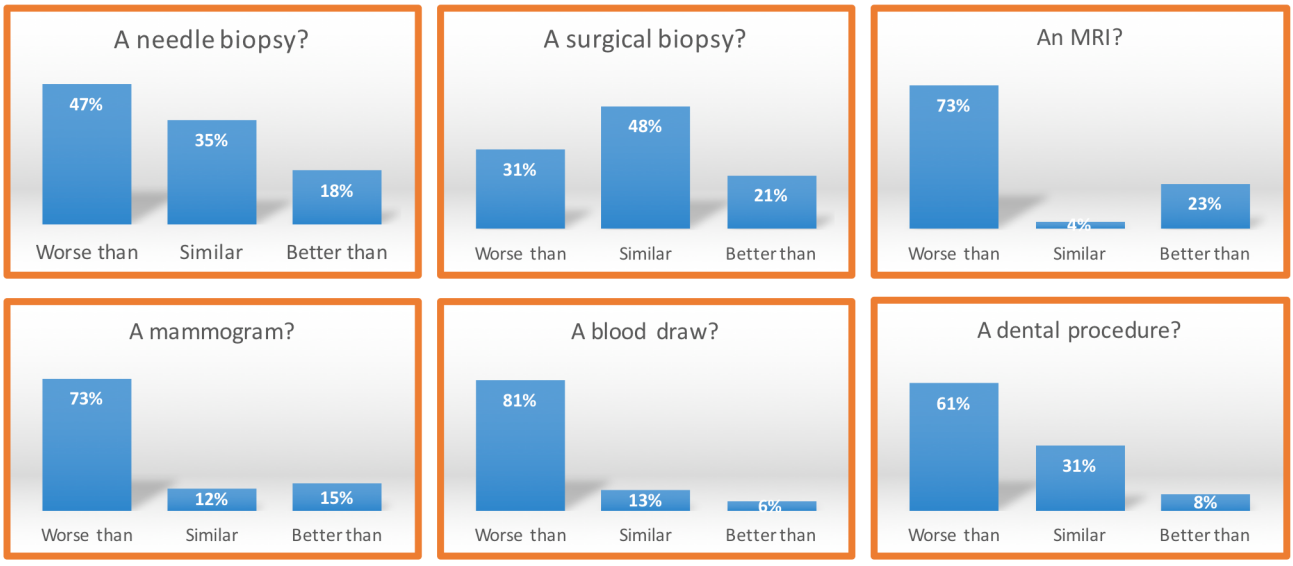


- Complications, including infections and bleeding, happened in 6 out of 100 people (6%) following the exams.



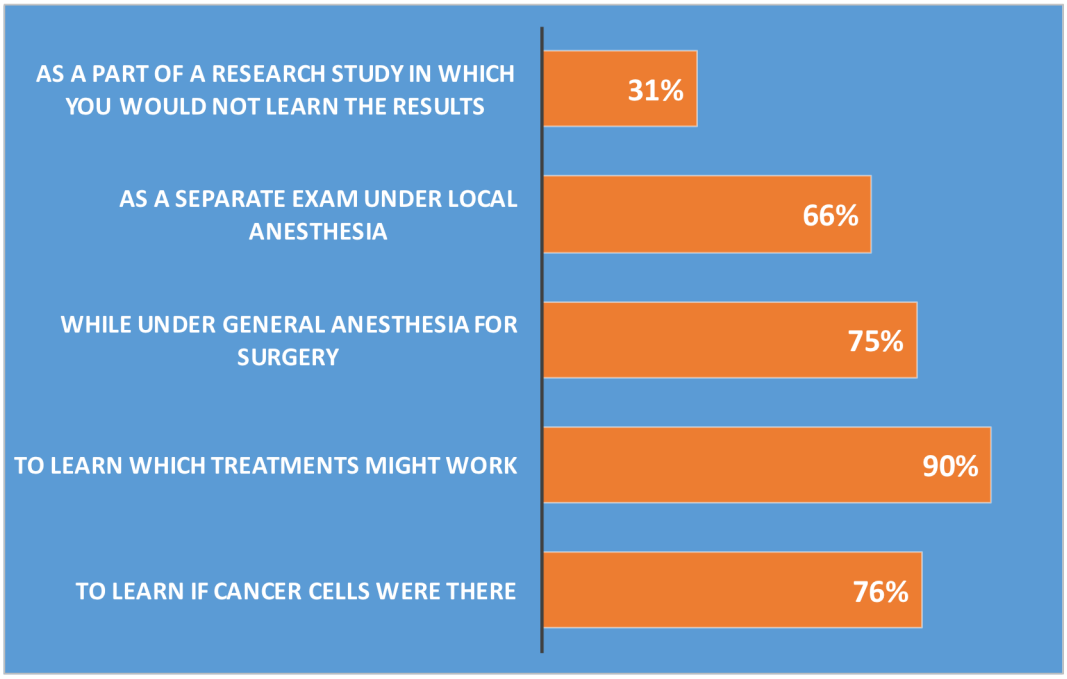
- Most people who had a bone marrow exam thought it was worse than a needle biopsy, MRI, mammogram, blood draw and dental procedure, and similar to a surgical biopsy.

In terms of pain and discomfort, how different is a bone marrow exam from:



- About 3 in 10 of all people (31%) said they would have a bone marrow exam as a part of a research study in which they would not learn the results. (Among this group, only 1 in 4 people (25%) had previously had a bone marrow exam.)
- Nine in 10 people (90%) said they were willing to have a bone marrow exam to learn which treatments might work.
- About 3 in 4 people (76%) said they would have a bone marrow exam to learn if cancer cells had spread.

Would you be willing to have a bone marrow exam for any of the following reasons or under any of these conditions?



Conclusions: Previous studies have shown that bone marrow exams are widely associated with pain and anxiety by blood cancer patients. Our exploratory survey suggests a similar association for breast cancer patients. Women were more willing to have the procedure while under general anesthesia during surgery than as a separate procedure under local anesthesia. Most women see value in a bone marrow exam that can help identify treatment choices, and many would have the exam to learn if cancer cells had spread, but not solely for research.

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