A Canadian study shows that most women with early-stage breast cancer will undergo imaging to determine if the cancer has metastasised, despite international guidelines that recommend against testing. Advanced imaging — such as computed tomography, MRI and positron emission tomography — is increasingly used to detect possible metastases and now comprises 41 percent of all initial tests, according to the study published in *CMAJ* (Canadian Medical Association Journal).

However, guidelines from the American Society of Clinical Oncology, Cancer Care Ontario and the National Comprehensive Cancer Network recommend against imaging for metastatic cancer in asymptomatic women with stage I or II breast cancer, because the likelihood of metastases is low, at 0.2 percent and 1.2 percent respectively, and the chance of false-positive findings are high. Unnecessary investigation can result in harm because false-positive results can lead to more invasive tests, treatment delays and increased anxiety.

The new study covered 26,547 women in Ontario who were diagnosed with stage I or stage II breast cancer between 2007 and 2012. Dr. Mark Clemons, an oncologist at The Ottawa Hospital and the University of Ottawa (Ontario), and colleagues conducted the study and reported these key findings:

- 22,811 patients (86 percent) underwent at least one imaging test to detect whether the cancer had metastasised.
- Imaging was performed in about 80 percent of women with stage I breast cancer and about 93 percent in those with stage II.
- The average number of tests performed per patient was 3.7 in the pre- and postoperative periods.
- Surgeons and oncologists ordered the most tests, with surgeons ordering 74 percent of preoperative tests and oncologists ordering about 41 percent of postoperative tests.

"Despite guidelines against imaging to detect radiologically evident distant metastases, our results show that this practice is very common among patients with early-stage breast cancer in Ontario," Dr. Clemons' team says.

In addition, the study revealed variability in use of imaging between geographic regions in the province and between community hospitals and academic institutions.

"If guideline recommendations are to be implemented in practice, additional knowledge translation strategies are needed, as dissemination of clinical practice guidelines alone is not an effective method of changing physician
practice behaviours. ... These strategies will also require patient engagement," conclude the researchers.

Source: Canadian Medical Association Journal
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