

Results Support Active Surveillance for Low-Grade DCIS

Will Fear and Anxiety Allow for Change?

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Surgery might be unnecessary for patients with low-grade ductal carcinoma in situ (DCIS). Instead, they could be managed with active surveillance.

That bombshell conclusion comes from a retrospective study of 57,222 American women with DCIS that showed no survival benefit from surgery in women with low-grade disease. It was [published online](#) June 3 in *JAMA Surgery*.

However, the authors of an [accompanying commentary](#) disagree.

DCIS consists of breast tissue abnormalities that are not actually cancer. Nonetheless, it is almost always treated as such because 25% to 50% of cases will progress to invasive disease. In the United States, women with DCIS undergo aggressive surgical and radiation treatment.

However, somehow 1169 patients with DCIS in 10 health districts were managed without surgery from 1988 to 2011 and entered into the logs of Surveillance, Epidemiology and End Results (SEER) database.

These exceptional cases allowed a team of researchers to compare this group with the 56,053 patients who were treated with surgery.

They found that 10-year breast-cancer-specific survival was significantly better in patients with intermediate- and high-grade disease who had undergone surgery than in those who had not.

But for women with low-grade DCIS, surgery appeared to be superfluous. Ten-year breast-cancer-specific survival was the same for patients who underwent surgery and for those who did not (98.8% vs 98.6%; $P = .95$).

Propensity score weighting was used to balance patient characteristics in the surgery and nonsurgery groups, explain the researchers, led by Yasuaki Sagara, MD, from the Dana-Farber/Brigham and Women's Cancer Center in Boston.

Remarkably, this is the first study ever to examine the survival benefit of the surgical treatment of DCIS.

The median follow-up period was 6 years, during which there were 576 breast-cancer-specific deaths (1%).

The researchers champion active surveillance for low-grade disease. "From these results we could consider recommending a strategy of nonoperative management with active surveillance similar to that used in prostate cancer," they write.

Nothing except fear and anxiety.

So, what's keeping DCIS from being managed in the same way as increasing numbers of [low-risk prostate cancers](#) in the United States?

"Nothing except fear and anxiety," said E. Shelley Hwang, MD, from Duke University in Durham, North Carolina, who was not involved in the study and was asked for comment.

Dr. Hwang, Laura Esserman, MD, from the University of California, San Francisco, and various investigators have prominently advocated that patients with low-risk DCIS be managed with active surveillance. And they have executed some [clever research](#) that indicates that women are open to the idea.

But such clinicians are in a minority, evidently.

For example, study coauthor Mehra Golshan, MD, told *Medscape Medical News* that active surveillance is not happening at Dana-Farber/Brigham and Women's Cancer Center.

"We do have some patients who have refused surgery with the diagnosis of DCIS, but that is extremely uncommon," he said.

And active surveillance is apparently not recommended at Washington University in St. Louis, Missouri.

"For now, surgeons should hold on to their scalpels," Julie Margenthaler, MD, and Aislinn Vaughn, MD, who are both surgeons there, write in their commentary.

They articulate the conventional wisdom for treating all DCIS patients.

"Our current inability to accurately predict which women with DCIS are at the greatest risk for developing invasive disease generally necessitates that all patients diagnosed as having DCIS undergo treatment," they say.

Someday, genomic testing might allow for such patient selection, they add. In the meantime, though, DCIS grade, which is the tool that was used to differentiate patient risk in this study, is "not an appropriate surrogate," they state.

Dr. Golshan disagrees.

"Genomic studies are also costly and may not be readily available around the world. Nuclear grade is part of standard histopathology and something that is routinely done now," he said in an email to *Medscape Medical News*.

More insight will be coming from two ongoing randomized clinical trials in Europe — known as LORIS and LORD — which include active surveillance for the management of DCIS.

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Such a trial should be started in the United States as well, said Dr. Golshan.

But in the meantime, "despite the relatively benign course of DCIS, most women undergo aggressive surgical and radiation treatment," Drs Margenthaler and Vaughn report.

The fact that 98% of DCIS patients are treated with surgery even though roughly 50% to 75% of DCIS cases do not progress to invasive disease represents overtreatment, the pair acknowledge.

A new management strategy is needed, reformers have argued. "We should be [demanding change](#)," Dr. Esserman told *Medscape Medical News* in 2010.

In the United States, the number of cases of DCIS [continues to grow](#); it now represents more than one quarter of all newly diagnosed breast cancers. In the 1980s, before the advent of widespread mammography screening, only about 1% of all breast cancers were considered DCIS.

Study Details

In this study, low-, intermediate-, and high-grade DCIS corresponded to nuclear grades 1, 2, and 3, respectively, in the SEER database.

Table. Treatments in the Study Cohort

Treatment Group	Number	Percent
Surgery	56,053	100
Lumpectomy alone	11,310	20.2
Lumpectomy and radiotherapy	23,129	41.3
Mastectomy	16,334	29.1
Unknown	5,280	9.4
No surgery	1169	100
Not recommended	547	46.8
Contradictions	29	2.5
Patient refusal	115	9.8
Reason unknown	478	40.9

As noted, outcomes were different for patients with intermediate- and high-grade DCIS than for those with low-grade disease.

For intermediate grade DCIS, there was an absolute difference in weighted 10-year breast-cancer-specific survival of 4.0% between the surgery and nonsurgery groups (98.6% vs 94.6%); for high-grade DCIS, there was an absolute difference of 7.9% (98.4% vs 90.5%).

On multivariable analysis, the difference in weighted hazard ratios for breast-cancer-specific survival between the surgery and nonsurgery groups for low-grade DCIS was not significant (hazard ratio [HR], 0.85; 95% confidence interval [CI], 0.21 - 3.52).

However, the difference was significant for intermediate-grade DCIS (HR, 0.23; 95% CI, 0.14 - 0.42) and high-grade DCIS (HR, 0.15; 95% CI, 0.11 - 0.23).

The researchers report that they also crunched the numbers for overall survival for all three comparisons and found similar results.

In their analyses, the researchers used the variables typically included in the SEER database: age, race, histology, tumor size, nuclear grade, receptor status, surgery type, use of radiation therapy, and

cause of death.

The authors have disclosed no relevant financial relationships. Dr. Hwang reports financial ties with Genomic Health and Merck.

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