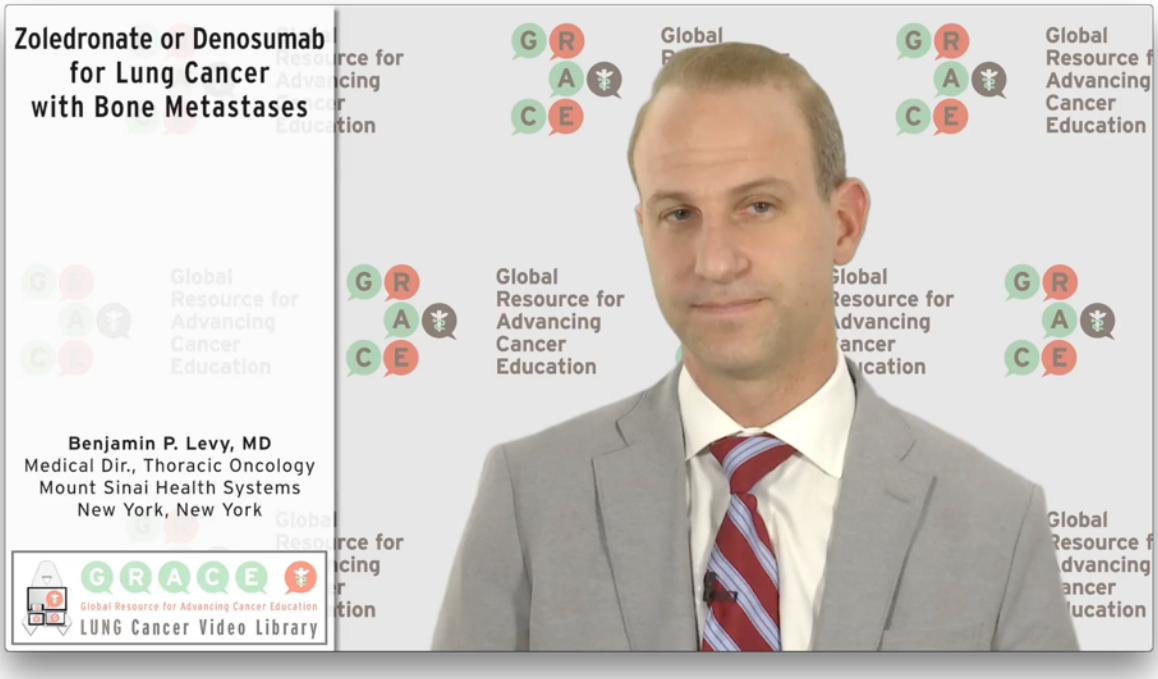
Global Resource for Advancing Cancer Education

LUNG Cancer Video Library

Zoledronate or Denosumab for Lung Cancer with Bone Metastases



TRANSCRIPT & FIGURES

One of the important points about patients with advanced lung cancer is that 30-40% of patients will develop bone metastases. I think it's important to recognize this is not bone cancer, this is lung cancer that's moved to the bone, and in 30-40% of patients at some point who have advanced stage lung cancer, they will develop bone metastases. The question is: how do you manage these patients?

Now of course they're going to be treated with chemotherapy or targeted therapies or immunotherapies to help control the cancer, but one of the other strategies that's employed are bone strengthening agents. They come in really two forms, and the goals of giving a bone strengthening agent really are to delay skeletal-related events or fractures, and also strengthen the bones. I would say that they're the standard of care for any patient with lung cancer who has bone metastases.

So currently there are two approved drugs for lung cancer patients with bone metastases. The first is called zoledronic acid, it's given every three weeks and it's a class of drugs called a bisphosphonate. These drugs are also used for osteoporosis. What we know about zoledronic acid or Zometa is that it does delay skeletal-related events or fractures in patients who get these drugs who have bone metastases in lung cancer.

The second class of drugs are called RANK-Ligand inhibitors, and the drug that's approved for lung cancer is denosumab or Xgeva. This drug is a little different in its administration — it's given subcutaneously rather than intravenously, and it's also given every four weeks rather than every three weeks.

I think what we know about both of these drugs is that they do help strengthen the bones and delay skeletal-related events, but there's a hint that denosumab, that second drug I mentioned, may also have some sort of anti-tumor effect. I'm not sure that this is completely ironed out in the literature, but we do know at least in one study published in 2012 that patients who actually got denosumab as a bone strengthening agent actually lived longer than those patients who got zoledronic acid. Now whether we can make or glean any major messages from this, I'm not sure. Nevertheless, my practice has been that any patient with lung cancer who develops bone metastases needs to be put on one of these two drugs.

These drugs do have side effects — one of the side effects with zoledronic acid is osteonecrosis of the jaw. This has happened in a very, very small percentage of patients so I don't think that's enough of a concern for me not to use the drug. Both of these drugs are extremely well tolerated and actually do help with the end points that I mentioned in terms of delaying fracture for those patients with bone metastases, but also potentially improving outcomes specifically with denosumab.

GRACE.expert/GCVL