Third-Line Treatment for Small Cell Lung Cancer

I was diagnosed with small cell lung cancer with metastasis to the liver. After a couple of cycles of topotecan and paclitaxel, I improved, but my cancer later progressed. My chemotherapy was changed several months ago to cisplatin and irinotecan, which seemed to significantly help me. However, in the last month I started feeling worse, and CT scans show by cancer is now more widespread. I'm now waiting for my oncologist to decide what to do next. But my question to you is: are there other chemotherapy treatments that could be prescribed in cases like mine?

Barbara Campling, MD, Medical Oncologist, responds:

When you were first diagnosed with small cell lung cancer, it had spread to your liver. It sounds like you had a very good response to your initial chemotherapy with paclitaxel (Taxol) and topotecan. The majority of cases of small cell lung cancer respond initially to chemotherapy, sometimes dramatically. However, unfortunately, when the cancer has spread outside of the chest at diagnosis, it almost invariably recurs, and then it becomes more difficult to treat.

In your case, when the cancer started to grow again, you were treated with two drugs that are very active in small cell lung cancer, irinotecan and cisplatin. Again, the cancer responded, but unfortunately it has now started to regrow yet again. Responses to second-line chemotherapy are generally not as dramatic as the responses to initial therapy, and the duration of response is often not as long. This is because the cancer cells become resistant to chemotherapy, and not just the drugs that have already been used, but also to other structurally and functionally unrelated drugs. This is a phenomenon called "multidrug resistance." Scientists have come a long way in understanding how cancer cells become multidrug resistant, but unfortunately, we do not yet have any clinically effective medications for overcoming this resistance.

Did your cancer start to grow again while you were still receiving your second-line chemotherapy? If this is the case, the chances of responding to other chemotherapy drugs are quite low. If you have been off of chemotherapy for a few months before the cancer started to regrow, then the chances of responding to further treatment are a bit better, although the tumor is not likely to respond as well as to previous treatments. There are a number of other drugs with activity in small cell lung cancer, including etoposide (VP-16) and gemcitabine. If you are feeling well enough, it may be worth trying further chemotherapy. If you respond again, there may be some improvement in your symptoms, as well as some prolongation of your life. If you do not have further chemotherapy or if further treatment is not effective, you should talk to your doctor about what can be done to make you more comfortable and control pain or whatever symptoms that you may be having. Even when chemotherapy does not help, there are usually other interventions that can be done to relieve the symptoms of this difficult disease.

The Abramson Cancer Center of the University of Pennsylvania

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