

We move on to the next session which is early stage lung cancer. I would like to invite Dr. Virendra Tiwari from TMH to speak about whether we can cut less to do more in lung cancers. Thank you, Priya.

The topic is whether sublobar resection is advisable in a high-risk stage 1 NSCLC. So these are two graphs. One is from JCOG, another one is from CalGP, and both are randomized control trial enrolling more than 700 to 1,000 patients. And the result is that it is non-inferior. Sublobar resection is non-inferior compared to anatomical lobectomy. But in a selected patient, less than or equal to 2 centimeter peripheral and N0 disease.

Now, there was, you know, there is a strong discussion whether it is advisable in high risk. So what all histological characteristic that you will think that these are high risk. One is visceral pleural invasion, another one is poorly differentiated. Lymphovascular invasion, perineural invasion kind of thing. And obviously postoperatively if you see substandard nodal dissection. These are high risk features. So if you see in

Inclusion criteria in these two studies, they were all based upon CT scan finding and it is very difficult to diagnose visceral pleural invasion on the scan itself.

So most of these are diagnosed on your pathology. So you have included T1, but if you get a visceral pleural invasion, that is upstaged to T2. So in such subset of patients, should we limit our resection to sublobar or should we plan for anatomical lung resection?

This is the paper that I was given to discuss in today's talk. So if you see Al-Tawarqi, he's a lead author of CalGB trial. This is a subgroup analysis of his trial only. It's a post hoc analysis where they have seen the DFS and OS difference in this subset of patients. What they found out that out of 679 patients that were enrolled, around 16 percent of patients were upstaged to T2 on pathology.

5 year disease free survival was inferior in this group of patients and it was statistically significant. So if a patient is upstaged to T2, they had an inferior survival. So it was labelled that visceral pleural invasion is a poor prognostic indicator. But

Should we limit our resection or should we standardize that any patient who has got visceral prural invasion if diagnosed preoperatively and should we go ahead with lobectomy? So what they found that if these subgroup of patients had undergone sublobar resection, that is VEG or segmentectomy, compared to anatomical lung resection, there was no significant DFS difference. Obviously, if they were upstaged, they were prognostically poor compared to T1.

But in T2 subset of patients also, if you do sublobar versus anatomical resection, there was no significant difference in that group of patients. Same was with recurrence-free survival and the overall survival also. Overall survival also almost the same in a patient who was upstaged to T2, either underwent sublobar resection or the lobectomy.

So they concluded that if there is an upstaging to T2, it is obviously a poor prognostic factor. It has worse disease-free survival, recurrence-free survival compared to a purely T1 disease. But the outcome is unaffected by extent of parenchymal resection, that is sublobar versus lobectomy in upstage T2 cases.

But they also concluded that these subset of patients, if they are upstaged, it warrants a solid adjuvant therapy because there is a poor overall survival compared to T1 and most of the recurrences were metastatic disease.

But it has some problems also. It was an unplanned exploratory analysis. The number of patients were very few. So it does not give you a solid statistical power to get this conclusion. And other high-risk features that they quoted, again what I have started with, lymphovascular invasion, perineural invasion, poorly differentiated and solid pattern.

Contradictory to that, we have a lot of retrospective analysis. One of that paper I have quoted, this was published in 2024 in Annals of Surgical Oncology. This is a retrospective analysis from a hospital where they found that if patients have undergone sublobar resection and those subset of patients were upstaged to T2 on pathology, all outcomes were inferior compared to patients who remained at T1 and underwent sublobar resection. So overall survival, recurrence-free survival,

as well as disease-free survival was poorer in a patient who was upstage to T2 or had a poor prognostic factor like poorly differentiated lymphovascular or PNI. So their conclusion was that in a high-risk feature, if we can diagnose, it is advisable to go ahead with anatomical lung resection, that is lobectomy. But we do not have sufficient data. And it is very difficult to get a randomized controlled trial

where you have two arms with sublobar resection in one arm patients with high-risk feature and another arm patient with low-risk feature. So obviously we'll have to depend on the subset analysis or the retrospective studies. We do not have enough evidence to say either we should go ahead with lobectomy in high-risk feature or sublobar resection is also good enough. Thank you.