So, good morning everyone. So, after an excellent talk by Dr. Kil Kapoor regarding pembrolysmab and resectable lung cancer. So, now we will discuss about next talk about perioperative toripalumab plus chemotherapy for resectable non-small cell lung cancer.
So, it is a neo-tortzed randomized trial. So, this was the study design. They have taken stage 2, stage 3 resectable NSCLC, EGFR-ALC wild type, biopsy tissue available for the biomarker analysis and all the available lesions stratified according to stage 2 versus stage 3. What type of surgery, low-victimy versus pneumonectomy, non-squamous versus squamous, and what was the percentage of PD-L1 expression. So, phi naught 1 patients were randomized in 1 is to 1. So, patients had received knee-hodgement 3 cycles of toripalumab plus platinum-based therapy. The dose of toripalumab is IgG-4 monoclonalized antibody against PD1.
So, 240 MG dose of toripalumab plus chemotherapy versus placebo plus platinum-based chemotherapy.
Patients had received 3 cycles every once in every 3 weeks followed by surgery followed by after surgery one more cycle of chemotherapy plus toripalumab and then maintenance immunotherapy for 13 cycles. So, the primary endpoints were even free survival. So, basically this was the interim analysis. Stage 2 cancers were excluded and stage 3 were taken. So, EFS by investigator, EFS by investigator in stage 2, stage 3, major pathological response by blinded independent pathological review and the secondary endpoints were overall survival, pathological complete response, EFS by the independent review committee, disease free survival, safety and feasibility of the surgery. So, this was the regular platinum-based regimen they have taken, dose of paxxyl or paxxyl with cisplatin or carboplatin for squammas, pemetric side with cisplatin or carboplatin for non-squammas. So, patients underwent radiological imaging at baseline and then after completion of knee-hodgement therapy before the surgery prior to again initiation of adjuvant therapy and then every 3 months for 2 years and then every 6 months. So, the EFS major pathological response was defined as 10% or less viable tumor cells in the tumor bed. The disease free survival was defined as the time from surgery to the first documentation of disease progression, local or distant recurrence and death and the PDL1 was. So, this was the different validated JS3.11 assay which they have taken for analyzing the PDL1 score. So, this was the baseline characteristics.
Most of the patients age was 62 years, most of the patients were male population almost 89% in the toripalumab group. We can see the squammas histology was very common, 78% were almost like squammas histology, stage 3a, 67% stage 3b in around 32%, n0, n1, n2 was seen in around 68% in the toripalumab group. So, we can see this was the

treatment
summary, almost 2.02 patients, 4.04 patients were randomized in the toripalumab or eligible,
actually 2.02 in the toripalumab bomb. So, 100% patients received knee adjuvant therapy,
adjuvant in around 71% and maintenance therapy in around 71%. So, we can see almost 82%
patients underwent surgery after perioperative 3 cycles of therapy. Only 18 patients surgery
was not done either due to disease progression, refusal, adverse event and other. We can
see the RGO rejection rate was around 82% in the toripalumab group. Mostly the surgery
was low-vector mean around 80% and nemonectomy was in the 9%. So, this is the event free
survival analysis. So, 144 events were observed. Basically, we can see with the median follow-up
of 18 months, the median EFS was not estimable versus 15 months. We can see there is a clear
difference in the curves at 1 year as well as 2 year. At 2 years, it was 64% versus 38%
with the hazard ratio of 0.4 with significant p-value. So, the right curve is EFS which
was done by an independent review committee. Again, we can see there is a clear difference
between the curves at even a 2 year 66% versus 46% with significant p-value with the hazard
ratio of 0.4. So, this was the EFS which was done in PDL1 population. We can see even
less than 1% 1 to 49 greater than 50% all were benefited. Especially in 1 to 49, more
than 50% the hazard ratio was 0.3 and the median EFS more than 50% showed not estimable
versus 15 months in the more than 50% group. So, this was the EFS in non-squamous and squamous.
In the median EFS in non-squamous was not reached versus 21 months and in the squamous
it was not reached versus 12.9 months in the squamous group. So, this was the major pathological
response rates. We can see there is a clear difference between the two, almost 48% versus
8% with a difference of 40.2% with again a significant p-value between the placebo versus
to repalima group. This was the EFS by the pathological complete response rates. We can
see there were almost 24.8% pathological complete response rate in the to repalima group versus
only 1% in the placebo arm. So, we can see there is a difference of 23.7% with significant
p-value. So, this was the DFS not reached versus 19 months. Almost most of the patients
received the to repalima for maintenance 13 cycles. Near adjuvant almost all patients
received three cycles, adjuvant one cycle and then maintenance for 13 cycles. So, the
efficacy and safety was good in the to repalima group. We can see this was the interim overall
survival analysis. There is a two-year overall survival of around 81% versus 74% at the interim

analysis. So, these are the treatment related adverse events. Almost more than or equal to one event was seen in both the groups. 99% in the to repalima and more than 63% had a greater more side effects. We can see these were the discontinuation rates for around 9% versus 7%. Fattel adverse events were 3% versus 2%. Interaction was noted in around 28% and then immune related adverse effects 42% versus 22%. Great three are higher immune events were around 11% versus 3%. So, we can see the most common adverse effects were cough, increased AST, decreased appetite, rash as well as the hypothyroidism. So, coming to the summary, the to repalima plus chemotherapy significantly improved EFS not reached versus 15 months with the 18 months follow up and we can see there was a higher major pathological response rates with around 48% and even the PCR was around 24% compared to the placebo arm. We can the EFS was seen in all groups irrespective of the PD 11 even in non squamous and squamous, but the squamous's company population was more around 78% in this study. Thank you.