**Assad Ali**

**Proposal:**

There are no data on survival benefit for lung cancer patient with brain metastasis on Anti-PD1 therapy along with adjuvant therapy. Our study reports the overall survival and outcomes based on the onset of Anti PD 1 therapy.

We retrospectively assessed the patients with lung adenocarcinoma with brain metastasis treated with anti PD-1 therapy i.e. nivolumab and pembrolizumab as a part of their first therapy and second therapy. Demographics, adjuvant treatment, along with anti PD-1 therapy and progression of Brain metastasis was identified using MRI Brain with overall survival status were collected to determine progression free survival after the first therapy and overall survival. A total of 100 patients were identified who had lung adenocarcinoma with brain metastasis and were on anti PD-1 therapy either in first or second therapy trial with a mean follow up of 20.25 months. Out of total patient sample 55% were female and 45% were male in which 13% had EGFR WT mutation and 18% had KRAS mutation. For 58 patients, retrospectively we were able to assess the progression; out of which 43 patients didn’t receive adjuvant anti PD-1 therapy treatment and 15 patients did receive the adjuvant therapy. Patients who didn’t receive anti PD-1 therapy in first round had higher PFS 13.767 (CI – 9.273, 18.262), compared to the patients that did receive anti PD-1 therapy 5.067 (CI 3.309, 6.825), p-Value: <0.0001. In terms of overall survival, a total of 88 patients were assessed in which 39 patients received anti PD-1 therapy in first round and 49 patients received PD-1 therapy in second round, overall survival for patient who received PD-1 therapy in second round was higher 14.882 months (CI – 12.112, 17.652), when compared to patients who received anti PD-1 therapy in first round 8.038 months (CI 5.343, 10.732), p-Value – 0.003.