

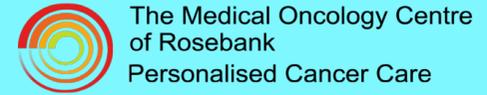
# Durable Remissions Associated with anti-CTLA-4 and anti-PD1 Checkpoint Inhibitors in a Single Center.

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## Background

### Melanoma

- ▶ Treatment with the anti-CTLA-4 checkpoint inhibitor ipilimumab and anti-PD1 nivolumab are associated with durable remissions in patients with solid tumours.
- ▶ We describe the durable remissions associated with these agents.
- ▶ There were 19 patients treated with ipilimumab and 25 patients treated with nivolumab and 1 patient was treated with combination of ipilimumab and nivolumab. In this analysis we included patients with metastatic malignant melanoma, non-small cell lung cancer (NSCLC), renal cell carcinoma and Hodgkin's disease.

## Methods

- ▶ The purpose of this analysis is to describe the durable remissions associated with ipilimumab and nivolumab on a variety of solid tumours treated at a single centre.
- ▶ This is a retrospective data analysis from 45 patients treated either in an expanded access programme, clinical trial setting or post-registration protocol.

## Results

- ▶ Total of 45 patients
- ▶ Gender (30 males/15 females).

### Nivolumab group = 25 patients

- ▶ Metastatic malignant melanoma = 3
- ▶ Non-small cell lung cancer = 18
- ▶ Renal cell carcinoma = 2
- ▶ Hodgkin's disease = 2

### Ipilimumab group = 19 patients

- ▶ Metastatic malignant melanoma = 19

### Ipilimumab + Nivolumab

- ▶ Non-small cell lung cancer = 1

### Number of cycles

- ▶ Nivolumab 167 cycles (median = 4, range 1-16)
- ▶ Ipilimumab 64 cycles (median = 4 cycles, range 1-4)

### Metastatic malignant melanoma

- ▶ There were 5 responses out 20 patients (25%) treated with ipilimumab including 3 patients with durable complete response (CR) of 74+, 46+ and 34+ months.
- ▶ One metastatic malignant melanoma patient treated with nivolumab has an ongoing partial response (PR) of 23 months.

### Non-small cell lung cancer

- ▶ In total 6 responses were documented among the 18 patients treated with nivolumab (33%). One patient had a durable CR of 10+ months, a second patient had a durable PR of 18 months.
- ▶ A patient treated with the combination of ipilimumab and nivolumab had a durable PR of 12+ months.

### Renal cell carcinoma

- ▶ One patient treated with nivolumab has an ongoing PR of 13+ months.

### Hodgkin's disease

- ▶ Two heavily pretreated patients with Hodgkin's disease treated with nivolumab have very good PRs of 14+ and 13+ months.

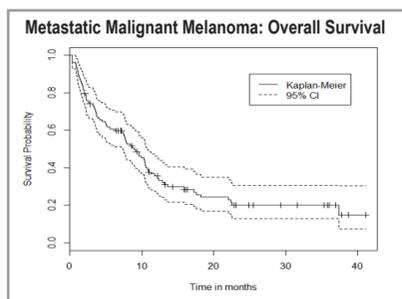


Table 1. Ipilimumab Durable Remission.

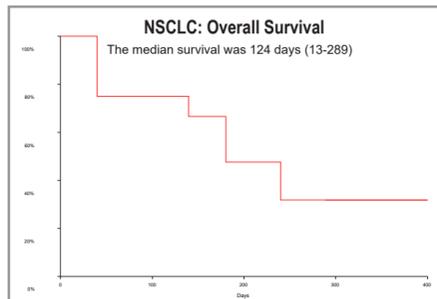


Table 2. Overall survival.

## Melanoma Case Presentation 1

### Melanoma

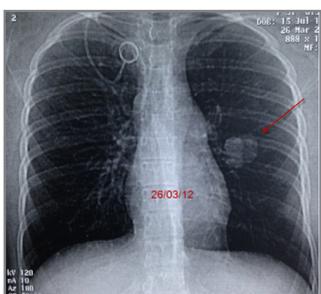


Figure 1. Pre-iplimumab.

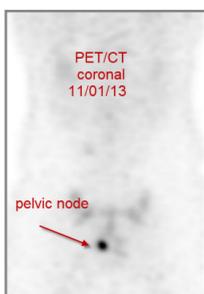


Figure 2. Pre-iplimumab.

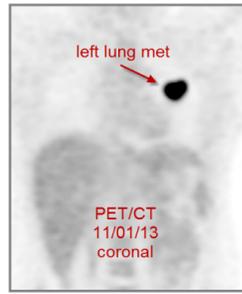


Figure 3. Pre-iplimumab.

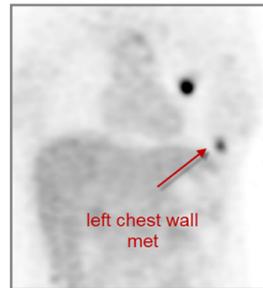


Figure 4. Pre-iplimumab.



Figure 5. Pre-iplimumab.

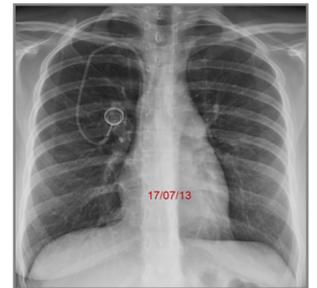


Figure 6. Post-iplimumab.

## Melanoma Case Presentation 2

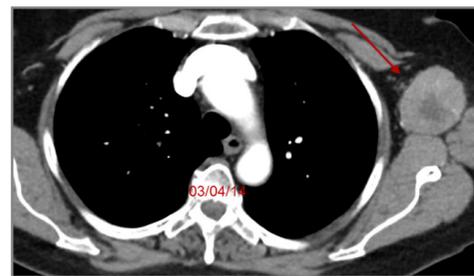


Figure 7. Pre-iplimumab.

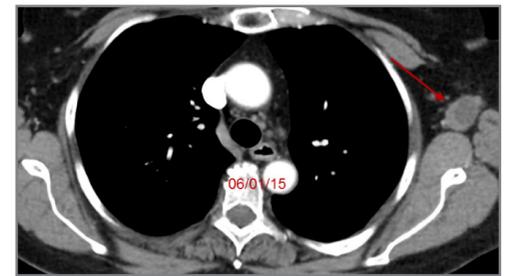


Figure 8. Post-iplimumab.

## Melanoma Case Presentation 3

### Melanoma



Figure 9. Pre-iplimumab.



Figure 10. On-Nivolumab.

### NSCLC

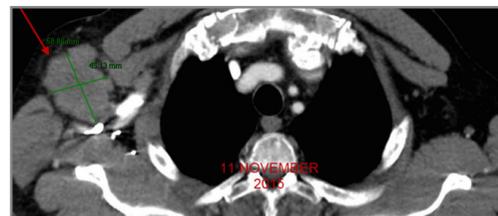


Figure 11. Pre-iplimumab.



Figure 12. On-iplimumab.

## Renal Cell Carcinoma

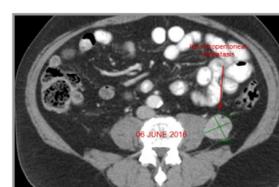


Figure 13. Patient Renal Cell Carcinoma Pre-Nivolumab.



Figure 14. Patient Renal Cell Carcinoma On-Nivolumab.



Figure 15. Patient Renal Cell Carcinoma On-Nivolumab.

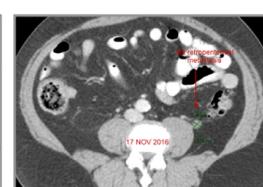


Figure 16. Patient Renal Cell Carcinoma On-Nivolumab.

## Hodgkin's Disease

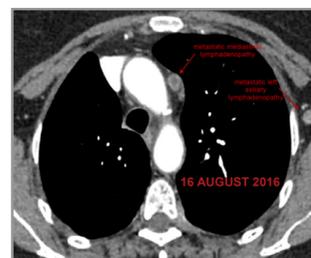


Figure 17. Hodgkin's disease patient Pre-Nivolumab.



Figure 18. Hodgkin's disease patient On-Nivolumab.

## Conclusions

- ▶ Anti-PD1 and anti-CTLA4 antibody treatment is associated with durable remissions in patients with a variety of solid tumours.
- ▶ Among our patients durable remissions and durable responses were documented in pretreated patients with metastatic malignant melanoma, NSCLC, renal cell carcinoma and Hodgkin's disease.