What is claimed is:

1. Use of an anti-PD-L1 antibody, or antigen binding fragment thereof, and an EGFR tyrosine kinase inhibitor in the manufacture of a medicament for the treatment of non-small cell lung cancer (NSCLC) in a human patient, wherein

(i) the anti-PD-L1 antibody, or antigen binding fragment thereof, has a heavy chain CDR1 comprising the amino acid sequence GFTFSRYWMS (SEQ ID NO: 3); a heavy chain CDR2 comprising the amino acid sequence NIKQDGSEKYYVDSVKG (SEQ ID NO: 4); a heavy chain CDR3 comprising the amino acid sequence EGGWFGELAFDY (SEQ ID NO: 5); a light chain CDR1 comprising the amino acid sequence RASQRVSSSYLA (SEQ ID NO: 6); a light chain CDR2 comprising the amino acid sequence DASSRAT (SEQ ID NO: 7); and a light chain CDR3 comprising the amino acid sequence QQYGSLPWT (SEQ ID NO: 8);

(ii) the EGFR tyrosine kinase inhibitor is gefitinib, or AZD9291;

(iii) the anti-PD-L1 antibody, or antigen binding fragment thereof, is to be administered at a dosage of 3 mg/kg or 10 mg/kg every 2 weeks and an EGFR tyrosine kinase inhibitor is to be administered at a dosage of 250 mg per day; and

(iv) the patient is identified as having a non-small cell lung cancer that is positive for an EGFR activating mutation.

2. The use according to claim 1, wherein the anti-PD-L1 antibody has a light chain comprising the amino acid sequence:
EIVLTQSPGTLSLSPGERATLSCRASQRVSSSYLAWYQQKPGQAPRLLIYDASSRATGIPDRFSGSGSGTDFTLTISRLEPE DFAVYYCQQYGSLPWTFGQGTKVEIK (SEQ ID NO: 1)

and a heavy chain comprising the amino acid sequence:

EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYWMSWVRQAPGKGLEWVANIKQDGSEKYYVDSVKGRFTISRDNAK NSLYLQMNSLRAEDTAVYYCAREGGWFGELAFDYWGQGTLVTVSS (SEQ ID NO:2).

3. The use according to claim 1 or 2, wherein the anti-PD-L1 antibody is MEDI4736.

4. The use according to of any one of claims 1-3, wherein the EGFR tyrosine kinase inhibitor is gefitinib.

5. The use according to of any one of claims 1-3, wherein the EGFR tyrosine kinase inhibitor is AZD9291.

6. The use according to any one of claims 1-5, wherein the non-small cell lung cancer is selected from the group consisting of squamous cell carcinoma, adenocarcinoma, large cell carcinoma, adenosquamous carcinoma and sarcomatoid carcinoma.

7. The use according to any one of claims 1-6, wherein the anti-PD-L1 antibody or MEDI4736 is to be administered at 3 mg/kg every 2 weeks.

8. The use according to any one of claims 1-6, wherein the anti-PD-L1 antibody or MEDI4736 is to be administered at 10 mg/kg every 2 weeks.

9. The use according to any one of claims 1-8, wherein the anti-PD-L1 antibody or MEDI4736 and gefitinib are to be administered for 8 weeks, 12 weeks, 16 weeks, 20 weeks or more.

10. The use according to any one of claims 1-9, wherein the EGFR activating mutation is in the EGFR kinase domain.

11. The use according to claim 10, wherein the activating mutation is a deletion in the EGFR kinase domain.

12. The use according to claim 11, wherein the deletion comprises amino acids at positions 746–750 (ELREA) (SEQ ID NO: 13) of an EGFR polypeptide.

13. The use according to claim 11, wherein the deletion is in a region encoded by exon 19 of an EGFR nucleic acid molecule.

14. The use according to any one of claims 1-13, wherein the patient is identified as responsive to treatment with an EGFR tyrosine kinase inhibitor.

15. The use according to any one of claims 1-13, wherein the patient is undergoing or has undergone treatment with an EGFR tyrosine kinase inhibitor or gefitinib.

16. The use according to any claim 12, wherein the EGFR polypeptide comprises a methionine at position 790.

17. The use according to any one of claims 1-13, wherein the anti-PD-L1 antibody, MEDI4736, or antigen binding fragment thereof, is to be administered before, during, or after administration of gefitinib or AZD9291.

18. The use according to any one of claims 1-13, wherein the anti-PD-L1 antibody, MEDI4736, or antigen binding fragment thereof, is to be administered concurrently with gefitinib or AZD9291.