CLAIMS

1. Use of at least one anti-PD-1 and/or PD-L1 antagonistic antibody in the manufacture of a medicament for treating lung cancer in a patient, wherein the medicament is to be administered to the patient on the same day or up to and including 4 days after radiation therapy that comprises a cycle of fractionated radiation therapy, wherein the cycle of fractionated radiation therapy comprises between 2 and 7 radiation therapy fractions and a dose of each fractionated radiation therapy is between 1.57 Gy to 3.9 Gy, and wherein the total dose of fractioned radiation therapy is about 11 Gy or lower.

2. Use of at least one anti-PD-1 and/or PD-L1 antagonistic antibody in the manufacture of a medicament for treating bladder cancer in a patient, wherein the medicament is to be administered to the patient on the same day or up to and including 4 days after radiation therapy that comprises a cycle of fractionated radiation therapy, wherein the cycle of fractionated radiation therapy comprises between 2 and 7 radiation therapy fractions and a dose of each fractionated radiation therapy is between 1.57 Gy to 3.9 Gy, and wherein the total dose of fractioned radiation therapy is about 11 Gy or lower.

3. Use of at least one anti-PD-1 and/or PD-L1 antagonistic antibody thereof in the manufacture of a medicament for treating head and neck cancer in a patient, wherein the medicament is to be administered to the patient on the same day or up to and including 4 days after radiation therapy that comprises a cycle of fractionated radiation therapy, wherein the cycle of fractionated radiation therapy comprises between 2 and 7 radiation therapy fractions and a dose of each fractionated radiation therapy is between 1.57 Gy to 3.9 Gy, and wherein the total dose of fractioned radiation therapy is about 11 Gy or lower.

4. The use of any one of claims 1-3, wherein the radiation therapy fractions are to be administered on sequential days.

5. The use of any one of claims 1-4, wherein the at least one anti-PD-1 and/or PD-L1 antagonistic antibody is to be administered on the last day of the treatment cycle.

6. The use of any one of claims 1-4, wherein the at least one anti-PD-1 and/or PD-L1 antagonistic antibody is to be administered multiple times.

7. The use of any one of claims 1-4, wherein the anti-PD-1 and/or PD-L1 antagonistic antibody is MEDI4736.

8. The use of any one of claims 1-4, wherein the anti-PD-1 and/or anti-PD-L1 antagonistic antibody is pembrolizumab.

9. The use of any one of claims 1-4, wherein the anti-PD-1 and/or anti-PD-L1 antagonistic antibody is nivolumab.

10. The use of any one of claims 1-4, wherein the anti-PD-1 and/or anti-PD-L1 antagonistic antibody is MPDL3280A.

11. Use of at least one anti-PD-1 and/or PD-Ll antagonistic antibody in the manufacture of a medicament for treating cancer in a patient, wherein the patient is to be administered with at least one dose of radiation therapy, wherein the medicament is to be administered on the same day or up to and including 4 days after the at least one dose of radiation therapy is completed, wherein the at least one dose of radiation therapy is fractionated radiation therapy, wherein the fractionated radiation therapy comprises from 2 to 7 fractions, wherein the fractions are between 1.57 Gy to 3.9 Gy, and wherein the total dose of fractioned radiation therapy is about 11 Gy or lower.

12. The use of claim 11, wherein the at least one dose of radiation therapy is x-rays, gamma rays, or charged particles.

13. The use of claim 11, wherein the at least one dose of radiation therapy is external-beam radiation therapy or internal radiation therapy.

14. The use of claim 13, wherein the external-beam radiation therapy is 3D conformational radiation therapy, intensity-modulated radiation therapy, image-guided radiation therapy, tomotherapy, proton therapy, or other charged particle beams.

15. The use of claim 11, wherein the at least one dose of radiation therapy is systemic radiation therapy.

16. The use of claim 11, wherein the fractionated radiation therapy comprises 5 fractions.

17. The use of claim 11, wherein the fractions are between 1.57 Gy to 2.2 Gy.

18. The use of claim 11, wherein the fractions of radiation therapy are to be administered on sequential days.

19. The use of claim 18, wherein the fractions of radiation therapy are to be administered on day 1, day 2, day 3, day 4, and day 5.

20. The use of claim 11, wherein the at least one anti-PD-1 and/or PD-Ll antagonistic antibody is adapted for being administrable the same day as the dose of radiation therapy is completed.

21. The use of claim 19, wherein the at least one anti-PD-1 and/or PD-Ll antagonistic antibody is adapted for being administrable on day 5.

22. The use of claim 11, wherein the at least one anti-PD-1 and/or PD-Ll antagonistic antibody is adapted for being administrable multiple times.

23. The use of claim 22, wherein the at least one anti-PD-1 and/or PD-Ll antagonistic antibody is adapted for being administrable 3 times a week.

24. The use of claim 11, wherein the at least one anti-PD-1 and/or PD-Ll antagonistic antibody is adapted for being administrable as a bolus dose or continuous infusion.

25. The use of claim 11, wherein the anti-PD-1 and/or anti-PD-Ll antagonistic antibody is MEDI4736.

26. The use of claim 11, wherein the anti-PD-1 and/or anti-PD-Ll antagonistic antibody is pembrolizumab, nivolumab, BMS-936558, AMP-224, or MPDL3280A.

27. The use of claim 11, wherein the cancer is recurrent and metastatic.

28. The use of claim 11, wherein the cancer is melanoma, colorectal cancer, breast cancer, bladder cancer, head and neck cancer, liver cancer, lung cancer, ovarian cancer, pancreatic cancer, or renal cancer.

29. The use of claim 11, wherein more than one cycle of the medicament is to be administered to the patient.

30. The use of claim 29, wherein from 2-8 cycles of the medicament are to be administered to the patient.

31. The use of claim 30, wherein the cycles are weekly or every other week.