CLAIMS

~~1. Use of at least one PD-1 and/or PD-L1 antagonist 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 a fraction of fractionated external-beam radiation therapy, wherein the fraction is 3.9 Gy or lower.~~

~~2. Use of at least one PD-1 and/or PD-L1 antagonist 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 a fraction of fractionated external-beam radiation therapy, wherein the fraction is 3.9 Gy or lower.~~

~~3. Use of at least one PD-1 and/or PD-L1 antagonist 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 a fraction of fractionated external-beam radiation therapy, wherein the fraction is 3.9 Gy or lower.~~

~~4.~~1. Use of at least one anti-PD-1 and/or PD-L1 antibody ~~or functional part thereof~~ 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 ~~a fraction of~~ fractionated ~~external-beam~~ radiation therapy, wherein the ~~fraction is~~ cycle of fractionated radiation therapy comprises between 2 and 7 radiation therapy fractions and a dose of each fractionated radiation therapy is between 1.5 Gy to 3.9 Gy, and wherein the total dose of fractioned radiation therapy is about 11 Gy or lower.

~~5.~~2. Use of at least one anti-PD-1 and/or PD-L1 antibody ~~or functional part thereof~~ 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 ~~a fraction of~~ fractionated ~~external-beam~~ radiation therapy, wherein the ~~fraction is~~ cycle of fractionated radiation therapy

comprises between 2 and 7 radiation therapy fractions and a dose of each fractionated radiation therapy is between 1.5 Gy to 3.9 Gy, and wherein the total dose of fractioned radiation therapy is about 11 Gy or lower.

~~6.~~3. Use of at least one anti-PD-1 and/or PD-L1 antibody ~~or functional part~~ 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 ~~a fraction of~~ fractionated ~~external-beam~~ radiation therapy, wherein the ~~fraction is~~ cycle of fractionated radiation therapy comprises between 2 and 7 radiation therapy fractions and a dose of each fractionated radiation therapy is between 1.5 Gy to 3.9 Gy, and wherein the total dose of fractioned radiation therapy is about 11 Gy or lower.

~~7. The use of any one of claims 1-6, wherein the patient is to be administered more than one fractions of external-beam radiation therapy that total about 70 Gy or lower.~~

~~8. The use of claim 7, wherein the patient is to be administered more than one fractions of external-beam radiation therapy that total about 50 Gy or lower.~~

~~9.~~4. The use of any one of claims 1-3~~7 or 8~~, wherein the ~~external-beam~~ radiation therapy fractions are to be administered on sequential days.

~~10.~~5. The use of any one of claims 1-4~~6~~, wherein the at least one anti-PD-1 and/or PD-L1 antibody ~~or functional part thereof~~ is to be administered on the last day ~~1~~ of the treatment cycle.

~~11.~~6. The use of any one of claims 1-4~~6~~, wherein the at least one anti-PD-1 and/or PD-L1 antibody ~~or functional part thereof~~ is to be administered multiple times.

~~12.~~7. The use of any one of claims 1-~~4-6~~, wherein the anti-PD-1 and/or PD-L1 antibody ~~or functional part thereof~~ is MEDI4736.

~~13.~~8. The use of any one of claims 1-~~4-6~~, wherein the anti-PD-1 and/or anti-PD-L1 antibody ~~or functional part thereof~~ is pembrolizumab.

~~14.~~9. The use of any one of claims 1-~~4-6~~, wherein the anti-PD-1 and/or anti-PD-L1 antibody ~~or functional part thereof~~ is nivolumab.

~~15.~~10. The use of any one of claims 1-~~4-6~~, wherein the anti-PD-1 and/or anti-PD-L1 antibody ~~or functional part thereof~~ is MPDL3280A.

~~16. The use of any one of claims 1-6, wherein the external-beam radiation therapy comprises stereotactic radiosurgery.~~

~~17.~~11. Use of at least one anti-PD-1 and/or PD-Ll antibody ~~antagonist~~ 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 ~~about~~ between 1.5 Gy to 3.9 Gy, and wherein the total dose of fractioned radiation therapy is about 11 Gy or lower.

~~18. The use of claim 17, wherein the at least one PD-1 and/or PD-Ll antagonist is an anti-PD-1 and/or anti-PD-Ll antibody or functional part thereof.~~

~~19.~~12. The use of claim 11~~17~~, wherein the at least one dose of radiation therapy is x-rays, gamma rays, or charged particles.

~~20.~~13. The use of claim 11~~17~~, wherein the at least one dose of radiation therapy is external-beam radiation therapy or internal radiation therapy.

~~21.~~14. The use of claim 13~~20~~, wherein the external-beam radiation therapy is 3D conformational radiation therapy, intensity-modulated radiation therapy, image-guided radiation therapy, tomotherapy, ~~stereotactic radiosurgery,~~ proton therapy, or other charged particle beams.

~~22.~~15. The use of claim 11~~17~~, wherein the at least one dose of radiation therapy is systemic radiation therapy.

~~23. The use of claim 17, wherein the at least one dose of radiation therapy is about 70 Gy or lower.~~

~~24. The use of claim 23, wherein the at least one dose of radiation therapy is about 50 Gy or lower.~~

~~25.~~16. The use of claim 11~~17~~, wherein the fractionated radiation therapy comprises 5 fractions.

~~26.~~17. The use of claim 11~~17~~, wherein the fractions are ~~about~~ between 1.5 Gy to 2.2 Gy ~~or lower~~.

~~27.~~18. The use of claim 11~~17~~, wherein the fractions of radiation therapy are to be administered on sequential days.

~~28.~~19. The use of claim 18~~27~~, wherein the fractions of radiation therapy are to be administered on day 1, day 2, day 3, day 4, and day 5.

~~29. The use of claim 28, wherein the at least one dose of radiation therapy comprises about 70 Gy to be administered in 5 fractions.~~

~~30.~~20. The use of claim 11~~17~~, wherein the at least one anti-PD-1 and/or PD-Ll antibody ~~antagonist~~ is adapted for being administrable the same day as the dose of radiation therapy is completed~~on day 1~~.

~~31.~~21. The use of claim 19~~17~~, wherein the at least one anti-PD-1 and/or PD-Ll antibody ~~antagonist~~ is adapted for being administrable on day 5.

~~32.~~22. The use of claim 11~~17~~, wherein the at least one anti-PD-1 and/or PD-Ll antibody ~~antagonist~~ is adapted for being administrable multiple times.

~~33.~~23. The use of claim 22~~32~~, wherein the at least one anti-PD-1 and/or PD-Ll antibody ~~antagonist~~ is adapted for being administrable 3 times a week.

~~34.~~24. The use of claim 11~~17~~, wherein the at least one anti-PD-1 and/or PD-Ll antibody ~~antagonist~~ is adapted for being administrable as a bolus dose or continuous infusion.

~~35.~~25. The use of claim 11~~18~~, wherein the anti-PD-1 and/or anti-PD-Ll antibody ~~or functional part thereof~~ is MEDI4736.

~~36.~~26. The use of claim 35, wherein the anti-PD-1 and/or anti-PD-Ll antibody or functional part thereof is pembrolizumab, nivolumab, BMS-936558, AMP-224, or MPDL3280A.

~~37.~~27. The use of claim 11~~17~~, wherein the cancer is recurrent and metastatic.

~~38.~~28. The use of claim 11~~17~~, 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.

~~39.~~29. The use of claim 11~~17~~, wherein more than one cycle of the medicament is to be administered to the patient.

~~40.~~30. The use of claim 29~~39~~, wherein from 2-8 cycles of the medicament are to be administered to the patient.

~~41.~~31. The use of claim 30~~40~~, wherein the cycles are weekly or every other week.