WHAT IS CLAIMED IS:

1. A method of treating a cancer, in a subject comprising administering to said subject 6-thio-2'-deoxyguanosine (6-thio-dG) followed by treatment with an immune checkpoint inhibitor, wherein the cancer is selected from the group consisting of pancreatic, lung, mesothelioma, stomach, esophagus, liver, biliary tract, bladder, head & neck, oral, nasopharyngeal, adult brain, colon, rectum, colorectal, prostate, ovarian, cervical, uterine, testicular, lymphoma, leukemia, skin, breast, kidney, neuroblastoma, Merkel cell carcinoma, myelodysplastic syndrome, myelofibrosis, and multiple myeloma.

2. The method according to claim 1, wherein the immune checkpoint inhibitor is a PD-1 inhibitor.

3. The method according to claim 1, wherein the immune checkpoint inhibitor is a PD-L1 inhibitor.

4. The method according to claim 1, wherein the immune checkpoint inhibitor is a CTLA-4 inhibitor.

5. The method according to claim 1, wherein the immune checkpoint inhibitor is a combination of one or more CTLA-4 inhibitors and one of more of PD-1 inhibitors.

6. The method according to claim 1, wherein the immune checkpoint inhibitor is a combination of one of more CTLA-4 inhibitors and one of more PD-L1 inhibitors.

7. The method according to any one of claims 1-6, wherein the 6-thio-dG administered is for about 1 to about 5 days per therapeutic cycle.

8. The method according to any one of claims 1-6, wherein the checkpoint inhibitor is administered for about 1 to about 3 days per therapeutic cycle.

9. The method according to anyone of claims 1-8, wherein the 6-thio-dG and the checkpoint inhibitor are administered in combination with a chemotherapeutic agent, a hormonal therapy, a toxin therapy or surgery.

10. A method of treating a cancer, in a subject comprising administering to said subject 6-thio-2'-deoxyguanosine (6-thio-dG) followed by treatment with cemiplimab (Libtayo®), wherein the cancer is selected from the group consisting of pancreatic, lung, mesothelioma, stomach, esophagus, liver, biliary tract, bladder, head & neck, oral, nasopharyngeal, adult brain, colon, rectum, colorectal, prostate, ovarian, cervical, uterine, testicular, lymphoma, leukemia, skin, breast, kidney, neuroblastoma, Merkel cell carcinoma, myelodysplastic syndrome, myelofibrosis, and multiple myeloma.

11. The method according to claim 10, wherein the 6-thio-dG administered for about 1 to about 5 days per therapeutic cycle.

12. The method according to any one of claims 10 and 11, wherein cemiplimab (Libtayo®) is administered for about 1 to about 3 days per therapeutic cycle.

13. The method according to anyone of claims 10-12, wherein the 6-thio-dG and cemiplimab (Libtayo®) are administered in combination with a chemotherapeutic agent, a hormonal therapy, a toxin therapy or surgery.

14. A method of treating cancer in a subject comprising administering to said subject 6-thio-2'-deoxyguanosine (6-thio-dG) followed by treatment with an immune checkpoint inhibitor administered in combination with radiotherapy, wherein the cancer is selected from the group consisting of pancreatic, lung, mesothelioma, stomach, esophagus, liver, biliary tract, bladder, head & neck, oral, nasopharyngeal, adult brain, colon, rectum, colorectal, prostate, ovarian, cervical, uterine, testicular, lymphoma, leukemia, skin, breast, kidney, neuroblastoma, Merkel cell carcinoma, myelodysplastic syndrome, myelofibrosis, and multiple myeloma.

15. The method according to anyone of claims 1-14, wherein the total dosage of 6-thio-dG administered over about 1-5 days of therapy is about 20-2000 mg.

16. The method according to any one of claims 1-14, wherein the cancer is lung, colorectal, liver, melanoma, or glioblastoma.

17. The method according to any one of claims 1-14, wherein the cancer is metastatic.

18. The method according to any one of claims 1-14, wherein the cancer is recurrent.

19. The method according to any one of claims 1-14, wherein the cancer is therapy resistant.

20. The method according to claim 10, wherein the therapy resistant cancer is checkpoint inhibitor therapy resistant.

21. The method according to claim 1, wherein the therapy resistant cancer is resistant to one or more of PD-1, PD-L1, and CTLA-4 inhibitors.

22. The method according to any one of claims 1-9, wherein said subject was previously treated with a checkpoint inhibitor therapy.

23. The method according to claim 22, wherein the subject was previously treated with one or more of a PD-1, PD-L1, and CTLA-4 therapy.

24. The method of any one of claims 1-23, wherein the administration of 6-thio-2-deoxyguanosine (6-thio-dG) followed by treatment with the checkpoint inhibitor is repeated at least once.

25. The method of any one of claims 1-23, wherein said 6-thio-dG and the checkpoint inhibitor are administered systemically.

26. The method of any one of claims 1-23, wherein said 6-thio-dG and the checkpoint inhibitor are administered locally or regionally to a tumor site.

27. The method of any one of claims 1-23, wherein said 6-thio-dG is administered locally or regionally to a tumor site and the checkpoint inhibitor is administered systemically.

28. The method of any one of claims 1-23, wherein administration of 6-thio-dG and the checkpoint inhibitor results in inhibition of tumor growth.

29. The method of any one of claims 1-23, wherein administration of 6-thio-dG and the checkpoint inhibitor results in remission of said cancer.

30. The method of any one of claims 1-23, wherein administration of 6-thio-dG and the checkpoint inhibitor results in reduction in tumor burden.

31. The method of any one of claims 1-23, wherein administration of 6-thio-dG and the checkpoint inhibitor results in inhibition of cancer cell metastasis.

32. The method of any one of claims 1-23, wherein administration of 6-thio-dG and the checkpoint inhibitor results in tumor eradication.

33. A method of treating a cancer, in a subject comprising administering to said subject 6-thio-2'-deoxyguanosine (6-thio-dG) followed by treatment with radiation therapy, wherein the cancer is selected from the group consisting of pancreatic, lung, mesothelioma, stomach, esophagus, liver, biliary tract, bladder, head & neck, oral, nasopharyngeal, adult brain, colon, rectum, colorectal, prostate, ovarian, cervical, uterine, testicular, lymphoma, leukemia, skin, breast, kidney, neuroblastoma, Merkel cell carcinoma, myelodysplastic syndrome, myelofibrosis, and multiple myeloma.

34. A method of treating a cancer, in a subject comprising administering to said subject 6-thio-2'-deoxyguanosine (6-thio-dG) preceded by treatment with radiation therapy, wherein the cancer is selected from the group consisting of pancreatic, lung, mesothelioma, stomach, esophagus, liver, biliary tract, bladder, head & neck, oral, nasopharyngeal, adult brain, colon, rectum, colorectal, prostate, ovarian, cervical, uterine, testicular, lymphoma, leukemia, skin, breast, kidney, neuroblastoma, Merkel cell carcinoma, myelodysplastic syndrome, myelofibrosis, and multiple myeloma.

35. The method of claims 29 or 30, wherein the cancer is selected from the group consisting of pancreatic cancer, lung cancer, stomach cancer, liver cancer, bladder cancer, head & neck cancer, oral cancer, nasopharyngeal cancer, brain cancer, colon cancer, prostate cancer, ovarian cancer, cervical cancer, testicular cancer, lymphoma, leukemia, skin cancer, breast cancer.

36. The method of any one of claims 29-31, wherein the administration of 6-thio-2-deoxyguanosine (6-thio-dG) and radiation therapy is repeated at least once.

37. A method of treating cancer in a subject comprising administering to said subject 6-thio-2'-deoxyguanosine (6-thio-dG) followed by treatment with an immune checkpoint inhibitor and radiation therapy. In some embodiments the checkpoint inhibitor is a PD-L1, PD-1, or CTAL-4 inhibitor. In some embodiments the PD-L1 inhibitor is selected from one or more of atezolizumab, avelumab, cosibelimab, bintrafusp alfa, durvalumab, MGD013, KNO35, KN046, AUNP12, CA-170, and BMS-9986189. In some embodiments, the PD-L1 inhibitor is atezolizumab. In some embodiments the PD-1 inhibitor is selected from one or more of pembrolizumab, nivolumab, cemiplimab, JTx-4014, sasanlimab, budigalimab, BI 754091, spartalizumab, camrelizumab, sintilimab, tislelizumab, zimberlimab, toripalimab, dostarlimab, INCMGA00012, AMP-224, REGN2810, BMS-936558, SHR1210, IBI308, PDR001, BGB-A317, BCD-100, JS001 and AMP-515. In some embodiments the PD-1 inhibitor is cemiplimab (Libtayo®). administered in combination with radiotherapy, wherein the cancer is selected from the group consisting of pancreatic, lung, mesothelioma, stomach, esophagus, liver, biliary tract, bladder, head & neck, oral, nasopharyngeal, adult brain, colon, rectum, colorectal, prostate, ovarian, cervical, uterine, testicular, lymphoma, leukemia, skin, breast, kidney, neuroblastoma, Merkel cell carcinoma, myelodysplastic syndrome, myelofibrosis, and multiple myeloma.