proliferation and cytokine production and block progression of the cell cycle. Thus, it was hypothesized that therapeutic blockade of the PD-1 pathway may be helpful in overcoming immune tolerance and that such a selective blockade may be of use in the treatment of cancer.

[0006] In human studies, R. M. Wong et al. (*Int. Immunol*. 19: 1223-1234 (2007)) showed that PD-1 blockade using a fully human anti-PD-1 antibody augmented the absolute numbers of tumor-specific CD8+ T cells (CTLs) in *ex vivo* stimulation assays using vaccine antigens and cells from vaccinated individuals. In a similar study, antibody blockade of PD-L1 resulted in enhanced cytolytic activity of tumor-associated antigen-specific cytotoxic T cells and increased cytokine production by tumor specific T_H cells (Blank C. et al., *Int. J. Cancer* 119: 317-327 (2006)). In 2014, the anti-PD-1 antibody pembrolizumab (Keytruda®) was approved by the United States Food and Drug Agency (US FDA) for the treatment of patients with unresectable or metastatic melanoma. Pembrolizumab was then subsequently approved for the treatment of certain patients with metastatic non-small cell lung cancer (NSCLC), recurrent or metastatic head and neck squamous cell cancer and refractory classical Hodgkin lymphoma.

[0007] Despite the recent developments, the prognosis for many patients with cancers, and in particular ovarian cancer, fallopian tube cancer, and cancer of the peritoneum, remains poor, there is a clear unmet medical need for more effective therapies that can, for example, achieve a high objective response rate as well as durable responses.

BRIEF SUMMARY

[0008] The present disclosure relates to the discovery that a combination of 6 mg/kg AIBW of IMGN853 (mirvetuximab soravtansine) and 200 mg pembrolizumab (Keytruda®) is effective for the treatment of ovarian cancer, fallopian tube cancer, and cancer of the peritoneum. Accordingly, combinations of an anti-FOLR1 immunoconjugate (*e.g.* IMGN853) with an anti-PD-1 antibody or antigen-binding fragment thereof (*e.g.*, pembrolizumab) are provided herein. To date, there is no clinical data available regarding treatment using combinations of an anti-FOLR1 immunoconjugate with a checkpoint inhibitor such as an anti-PD-1 antibody or antigen-binding fragment thereof.

[0008a] In one aspect, the present disclosure relates to use of a combination comprising an immunoconjugate that binds to Folate Receptor 1 (FOLR1), wherein said immunoconjugate comprises a maytansinoid and an anti-FOLR1 antibody or an antigen-binding fragment thereof comprising three heavy chain variable regions (VH) complementary determining regions (CDRs) and three light chain variable regions (VL) CDRs, wherein the three VH CDRs comprise of SEQ ID NO: 9 (CDR1), SEQ ID NO: 10 (CDR2), and SEQ ID NO: 12 (CDR3), and the three VL CDRs comprise SEQ ID NO: 6 (CDR1),

SEQ ID NO: 7 (CDR2), and SEQ ID NO: 8 (CDR3), and an anti-PD-1 antibody or an antigen-binding fragment thereof comprising three VH CDRs and three VL CDRs, wherein the three VH CDRs of the anti-PD-1 antibody or the antigen fragment thereof comprise SEQ ID NO: 20 (CDR1), SEQ ID NO: 21 (CDR2), and SEQ ID NO: 22 (CDR3), and the three VH CDRs of the anti-PD-1 antibody or the antigen fragment thereof comprise SEQ ID NO: 23 (CDR1), SEQ ID NO: 24 (CDR2), and SEQ ID NO: 25 (CDR3) in the manufacture of a medicament for the treatment of an endometrial ~~ovarian~~ cancer, ~~a peritoneal cancer, or a fallopian tube cancer,~~ wherein the immunoconjugate is to be administered at a dose of about 6 mg/kg adjusted ideal body weight (AIBW) and the anti-PD-1 antibody is to be administered at a dose of about 200 mg; and wherein the cancer expresses a FOLR1 protein, FOLR1 protein expression has been measured by immunohistochemistry (IHC) in a tumor sample obtained from the patient, and at least 50% to no more than 74% of cells in the tumor sample have an IHC score of at least 2 hetero or at least 2 homo.

[0009] Methods for treating a patient having ovarian cancer, peritoneal cancer, endometrial cancer or fallopian tube cancer are provided herein. In some examples, the method comprises administering to the patient in need thereof an immunoconjugate that binds to FOLR1, wherein the immunoconjugate comprises a maytansinoid and an anti-FOLR1 antibody or antigen-binding fragment thereof comprising a heavy chain variable region (VH) complementary determining region (CDR)1 sequence of SEQ ID NO:9, a VH CDR2 sequence of SEQ ID NO:10, and a VH CDR3 sequence of SEQ ID NO: 12, and a light chain variable region (VL) CDR1 sequence of SEQ ID NO: 6, a VL CDR2 sequence of SEQ ID NO: 7, and a VL

CDR3 sequence of SEQ ID NO: 8, and an anti-PD-1 antibody or antigen-binding fragment thereof comprising a VH CDR1 sequence of SEQ ID NO: 20, a VH CDR2 sequence of SEQ ID NO: 21, and a VH CDR3 sequence of SEQ ID NO: 22, and a VL CDR1 sequence of SEQ ID NO: 23, a VL CDR2 sequence of SEQ ID NO: 24, and a VL CDR3 sequence of SEQ ID NO: 25.

[0010] In some examples, the anti-FOLR1 antibody or antigen-binding fragment thereof comprises a VH comprising the sequence of SEQ ID NO: 3 and a VL comprising the sequence of SEQ ID NO: 5. In some examples, the anti-FOLR1 antibody or antigen-binding fragment comprises a heavy chain comprising the sequence of SEQ ID NO: 13 and a light chain comprising the sequence SEQ ID NO: 15. In some examples, the maytansinoid is DM4. In some examples, the maytanisonid is linked to the antibody or antigen-binding fragement thereof by a sulfo-SPDB linker.

[0010a] In another aspect, the present disclosure relates to use of a combination comprising an immunoconjugate that binds to FOLR1, wherein said immunoconjugate comprises a maytansinoid and an anti-FOLR1 antibody or an antigen-binding fragment thereof comprising (i) a heavy chain comprising the same amino acid sequence as the amino acid sequence of the heavy chain encoded by the plasmid deposited with the American Type Culture Collection (ATCC) as PTA-10772 and (ii) a light chain comprising the same amino acid sequence as the amino acid sequence of the light chain encoded by the plasmid deposited with the ATCC as PTA-10774; and an anti-PD-1 antibody or an antigen-binding fragment thereof comprising a heavy chain variable region (VH) comprising three complementary determining regions (CDRs) comprising SEQ ID NO: 20 (CDR1), SEQ ID NO: 21 (CDR2), and SEQ ID NO: 22 (CDR3), and a light chain variable region (VL) comprising three complementary determining regions (CDRs) comprising SEQ ID NO: 23 (CDR1), SEQ ID NO: 24 (CDR2), and SEQ ID NO: 25 (CDR3) in the manufacture of a medicament for the treatment of an endometrial ~~ovarian~~ cancer, ~~a peritoneal cancer, or a fallopian tube cancer,~~ wherein the immunoconjugate is to be administered at a dose of about 6 mg/kg adjusted ideal body weight (AIBW) and the anti-PD-1 antibody is to be administered at a dose of about 200 mg.

[0011] In some examples, the method for treating a patient having ovarian cancer, peritoneal cancer, or fallopian tube cancer comprising administering to the patient in need thereof an immunoconjugate that binds to FOLR1, wherein the immunoconjugate comprises a maytansinoid and an anti-FOLR1 antibody or antigen-binding fragment thereof comprising (i) a heavy chain comprising the same amino acid sequence as the amino acid sequence of the heavy chain encoded by the plasmid deposited with the American Type Culture Collection (ATCC) as PTA-10772 and (ii) a light chain comprising the same amino acid sequence as the amino acid sequence of the light chain encoded by the plasmid deposited with the ATCC as PTA-10774; and an anti-PD-1 antibody or antigen-binding fragment thereof comprising a VH CDR1

refractory. In some examples, the cancer is platinum resistant. In some embodiments, the cancer is platinum sensitive. In some examples, the cancer is metastatic or advanced.

[0025] In some examples, administration of the immunoconjugate with the anti-PD-1 antibody or antigen-binding fragment thereof produces a greater therapeutic benefit than administration of the immunoconjugate alone or the anti-PD-1 antibody or antigen-binding fragment thereof alone. In some examples, administration of the immunoconjugate and the anti-PD-1 antibody or antigen-binding fragment thereof does not produce more toxicity than administration of the immunoconjugate alone or the anti-PD-1 antibody or antigen-binding fragment thereof alone.

[0026] In some examples, the method further comprises administering a steroid to the patient. In some examples, the steroid is administered prior to the administration of the immunoconjugate. In some examples, the steroid is administered about 30 minutes prior to the administration of the immunoconjugate. In some examples, the steroid is a corticosteroid. In some examples, the steroid is dexamethasone. In some examples, the steroid is administered orally, intravenously, or a combination thereof. In some embodiments, the steroid is administered as an eye drop. In some examples, the eye drop is a lubricating eyedrop. In some examples, the method further comprises administering acetaminophen, diphenhydramine, or a combination thereof to the patient.

[0026a] In another aspect, the present disclosure relates to use of a combination comprising 6 mg/AIBW kg every 3 weeks (Q3W) of an immunoconjugate that binds to FOLR1 and 200 mg of pembrolizumab, wherein the immunoconjugate that binds to FOLR1 comprises an antibody linked to the maytansinoid DM4 by a sulfo-SPDB linker, wherein the antibody comprises (i) a heavy chain comprising the sequence of SEQ ID NO:13 and (ii) a light chain comprising the sequence of SEQ ID NO:15 in the manufacture of a medicament for the treatment of an endometrial ~~platinum resistant epithelial ovarian~~ cancer~~, a primary peritoneal cancer, or a fallopian tube cancer~~.

[0027] In some examples, the methods comprises treating a patient having ovarian, peritoneal, or fallopian tube cancer comprising administering to the patient in need thereof 6 mg/AIBW kg of an immunoconjugate that binds to FOLR1 and 200 mg of pembrolizumab, wherein the immunoconjugate that binds to FOLR1 comprises an antibody linked to the maytansinoid DM4 by a sulfo-SPDB linker, wherein the an antibody comprises (i) a heavy chain comprising the sequence of SEQ ID NO:13 and (ii) a light chain comprising the sequence of SEQ ID NO:15.

[0028] In some examples, the methods comprises treating a patient having ovarian, peritoneal, or fallopian tube cancer comprising administering to the patient in need thereof 5 mg/AIBW kg of an immunoconjugate that binds to FOLR1 and 200 mg of pembrolizumab,

wherein the immunoconjugate that binds to FOLR1 comprises an antibody linked to the maytansinoid DM4 by a sulfo-SPDB linker, wherein the antibody comprises (i) a heavy chain comprising the sequence of SEQ ID NO:13 and (ii) a light chain comprising the sequence of SEQ ID NO:15.

[0028a] In another aspect, the present disclosure relates to use of a combination comprising 6 mg/AIBW kg Q3W of an immunoconjugate that binds to FOLR1 and 200 mg of pembrolizumab, wherein the immunoconjugate that binds to FOLR1 comprises an antibody linked to the maytansinoid DM4 by a sulfo-SPDB linker, wherein the antibody comprises (i) a heavy chain comprising the same amino acid sequence as the amino acid sequence of the heavy chain encoded by the plasmid deposited with the American Type Culture Collection (ATCC) as PTA-10772 and (ii) a light chain comprising the same amino acid sequence as the amino acid sequence of the light chain encoded by the plasmid deposited with the ATCC as PTA-10774 in the manufacture of a medicament for the treatment of an endometrial ~~platinum resistant epithelial ovarian~~ cancer~~, a primary peritoneal cancer, or a fallopian tube cancer~~.

[0029] In some examples, the method comprises treating a patient having ovarian, peritoneal, or fallopian tube cancer comprising administering to the patient in need thereof 6 mg/AIBW kg of an immunoconjugate that binds to FOLR1 and 200 mg of pembrolizumab, wherein the immunoconjugate that binds to FOLR1 comprises an antibody linked to the maytansinoid DM4 by a sulfo-SPDB linker, wherein the an antibody comprises (i) a heavy chain comprising the

WHAT IS CLAIMED IS:

1. Use of a combination comprising:

   an immunoconjugate that binds to Folate Receptor 1 (FOLR1), wherein said immunoconjugate comprises a maytansinoid and an anti-FOLR1 antibody or an antigen-binding fragment thereof comprising three heavy chain variable regions (VH) complementary determining regions (CDRs) and three light chain variable regions (VL) CDRs, wherein the three VH CDRs comprise SEQ ID NO: 9 (CDR1), SEQ ID NO: 10 (CDR2), and SEQ ID NO: 12 (CDR3), and the three VL CDRs comprise SEQ ID NO: 6 (CDR1), SEQ ID NO: 7 (CDR2), and SEQ ID NO: 8 (CDR3), and

   an anti-PD-1 antibody or an antigen-binding fragment thereof comprising three VH CDRs and three VL CDRs, wherein the three VH CDRs of the anti-PD-1 antibody or the antigen fragment thereof comprise SEQ ID NO: 20 (CDR1), SEQ ID NO: 21 (CDR2), and SEQ ID NO: 22 (CDR3), and the three VL CDRs of the anti-PD-1 antibody or the antigen fragment thereof comprise SEQ ID NO: 23 (CDR1), SEQ ID NO: 24 (CDR2), and SEQ ID NO: 25 (CDR3)

   in the manufacture of a medicament for the treatment of an endometrial ~~ovarian~~ cancer, ~~a peritoneal cancer, or a fallopian tube cancer,~~

   wherein the immunoconjugate is to be administered at a dose of about 6 mg/kg adjusted ideal body weight (AIBW) and the anti-PD-1 antibody is to be administered at a dose of about 200 mg; and

   wherein the cancer expresses a FOLR1 protein, FOLR1 protein expression has been measured by immunohistochemistry (IHC) in a tumor sample obtained from the patient, and at least 50% to no more than 74% of cells in the tumor sample have an IHC score of at least 2 hetero or at least 2 homo.

2. The use of claim 1, wherein the anti-FOLR1 antibody or the antigen-binding fragment thereof comprises a VH comprising the sequence of SEQ ID NO: 3 and a VL comprising the sequence of SEQ ID NO: 5.

3. The use of claim 2, wherein the anti-FOLR1 antibody or the antigen-binding fragment comprises a heavy chain comprising the sequence of SEQ ID NO: 13 and a light chain comprising the sequence SEQ ID NO: 15.

4. The use of any one of claims 1-3, wherein the maytansinoid is DM4.

5. The use of any one of claims 1-4, wherein the maytansinoid is linked to the antibody or the antigen-binding fragment thereof by a N-succinimidyl 4-(2-pyridyldithio)-2-sulfobutanoate (sulfo-SPDB) linker.

6. Use of a combination comprising:

   an immunoconjugate that binds to FOLR1, wherein said immunoconjugate comprises a maytansinoid and an anti-FOLR1 antibody or an antigen-binding fragment thereof comprising (i) a heavy chain comprising the same amino acid sequence as the amino acid sequence of the heavy chain encoded by the plasmid deposited with the American Type Culture Collection (ATCC) as PTA-10772 and (ii) a light chain comprising the same amino acid sequence as the amino acid sequence of the light chain encoded by the plasmid deposited with the ATCC as PTA-10774; and

   an anti-PD-1 antibody or an antigen-binding fragment thereof comprising a heavy chain variable region (VH) comprising three complementary determining regions (CDRs) comprising SEQ ID NO: 20 (CDR1), SEQ ID NO: 21 (CDR2), and SEQ ID NO: 22 (CDR3), and a light chain variable region (VL) comprising three complementary determining regions (CDRs) comprising SEQ ID NO: 23 (CDR1), SEQ ID NO: 24 (CDR2), and SEQ ID NO: 25 (CDR3)

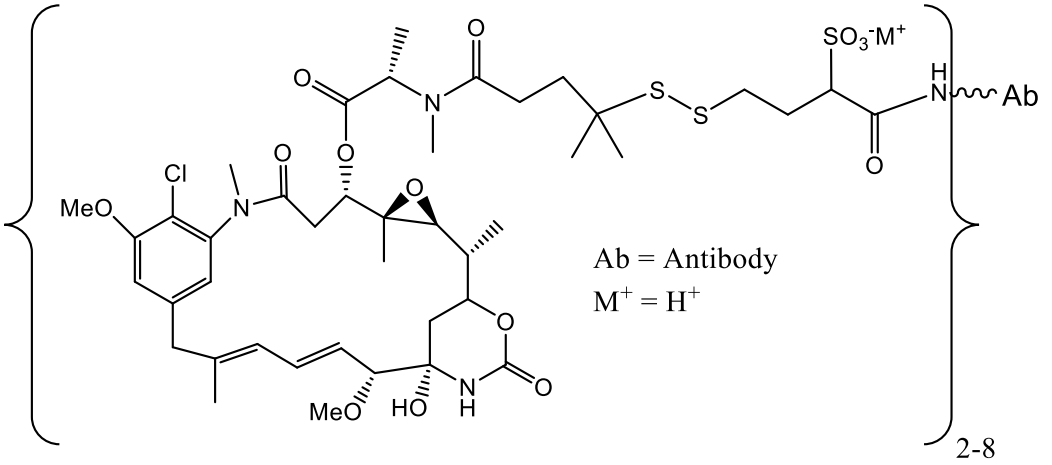
   in the manufacture of a medicament for the treatment of an endometrial ~~ovarian~~ cancer, ~~a peritoneal cancer, or a fallopian tube cancer,~~

   wherein the immunoconjugate is to be administered at a dose of about 6 mg/kg adjusted ideal body weight (AIBW) and the anti-PD-1 antibody is to be administered at a dose of about 200 mg.

7. The use of claim 6, wherein the maytansinoid is DM4, and wherein the DM4 is linked to the antibody by sulfo-SPDB.

8. The use of any one of claims 1-7, wherein the immunoconjugate comprises 1-10 maytansinoid molecules, 2-5 maytansinoid molecules, or 3-4 maytansinoid molecules per antibody.

9. The use of any one of claims 1-7, wherein the immunoconjugate has the following chemical structure:



Ab-sulfo-SPDB-DM4

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wherein "Ab" represents the anti-FOLR1 antibody or the ~~antigen binding~~antigen-binding fragment thereof.

10. The use of claim 9, wherein the immunoconjugate comprises 2-5 or 3-4 maytansinoid molecules per antibody.

11. The use of any one of claims 1-10, wherein the immunoconjugate is to be administered once every three weeks.

12. The use of any one of claims 1-11, wherein the anti-PD-1 antibody or the antigen-binding fragment thereof comprises a VH comprising the sequence of SEQ ID NO: 26 and a VL comprising the sequence of SEQ ID NO: 27.

13. The use of claim 12, wherein the anti-PD-1 antibody or the antigen-binding fragment thereof is pembrolizumab.

14. The use of any one of claims 1-13, wherein the anti-PD-1 antibody or the antigen-binding fragment thereof is to be administered once every 3 weeks.

15. The use of any one of claims 1-14, wherein the endometrial cancer is serous endometrial cancer.

16. The use of any one of claims 1-14, wherein the endometrial cancer is endometrioid endometrial cancer.

17. The use of any one of claims 1-16, wherein the endometrial cancer is a recurrent endometrial cancer.

~~15. The use of any one of claims 1-14, wherein the cancer is an ovarian cancer.~~

~~16. The use of claim 15, wherein the ovarian cancer is an epithelial ovarian cancer.~~

~~17. The use of claim 15 or 16, wherein the ovarian cancer is platinum resistant, relapsed, or refractory.~~

18. The use of any one of claims ~~15~~1-17, wherein the administration results in a decrease in CA125.

~~19. The use of any one of claims 1-14, wherein the peritoneal cancer is a primary peritoneal cancer.~~

~~20.~~19. The use of any one of claims 1-~~19~~18, wherein the endometrial cancer expresses a FOLR1 protein.

~~21.~~20. The use of claim ~~20~~19, wherein the FOLR1 protein expression was measured by immunohistochemistry (IHC) in a tumor sample that had been obtained from the patient.

~~22.~~21. The use of claim ~~21~~20, wherein a staining score of the tumor sample of at least 1 hetero, at least 1 homo, at least 2 hetero, at least 2 homo, or at least 3 hetero was measured by the IHC.

~~23.~~22. The use of claim ~~21~~20, wherein at least 25%, at least 33%, at least 50%, at least 66%, or at least 75% of cells in the tumor sample that had been obtained from the patient have an IHC score of at least 2 hetero or at least 2 homo.

~~24.~~23. The use of claim ~~21~~20, wherein at least 25%, at least 33%, at least 50%, at least 66%, or at least 75% of cells in the tumor sample that had been obtained from the patient have an IHC score of at least 3 hetero or at least 3 homo.

~~25.~~24. The use of claim ~~21~~20, wherein the patient is determined to be folate receptor alpha (FRα) positive.

~~26.~~25. The use of claim ~~25~~24, wherein Folate Receptor Alpha (FRα) positive comprises at least 50% of tumor cells having FOLR1 membrane staining visible at less than or equal to 10X microscope objective.

~~27.~~26. The use of claim ~~21~~20, wherein at least 25% of cells in the tumor sample that had been obtained from the patient have an IHC score of at least 2 hetero or at least 2 homo.

~~28.~~27. The use of claim ~~27~~26, wherein at least 25% to no more than 49% of cells in the tumor sample have an IHC score of at least 2 hetero or at least 2 homo.

~~29.~~28. The use of claim ~~27~~26, wherein at least 50% to no more than 74% of cells in the tumor sample have an IHC score of at least 2 hetero or at least 2 homo.

~~30.~~29. The use of claim ~~27~~26, wherein at least 75% to 100% of cells in the tumor sample have an IHC score of at least 2 hetero or at least 2 homo.

~~31.~~30. The use of any one of claims 1-~~30~~29, wherein the endometrial cancer expresses PD-L1.

~~32.~~31. The use of any one of claims 1-~~31~~30, wherein the patient has at least one lesion that meets the definition of measurable disease according to RECIST 1.1.

~~33.~~32. The use of any one of claims 1-~~32~~31, wherein the immunoconjugate and the anti-PD-1 antibody or the antigen-binding fragment thereof are to be administered sequentially in separate pharmaceutical compositions.

~~34.~~33. The use of claim ~~33~~32, wherein the immunoconjugate is to be administered before the anti-PD-1 antibody or the antigen-binding fragment thereof.

~~35.~~34. The use of any one of claims 1-~~34~~33, wherein the immunoconjugate is to be administered intravenously or intraperitoneally.

~~36.~~35. The use of any one of claims 1-~~35~~34, wherein the anti-PD-1 antibody or the antigen-binding fragment thereof is to be administered intravenously.

~~37.~~36. The use of any one of claims 1-~~36~~35, wherein administration is a first-line therapy.

~~38.~~37. The use of any one of claims 1-~~7~~ 36 wherein administration is a second-line therapy.

~~39.~~38. The use of any one of claims 1-~~38~~37, wherein the administration is a third-line therapy or later than ~~third line~~ third-line therapy.

~~40.~~39. The use of any one of claims 1-~~36~~38, ~~38, and 39,~~ wherein the patient has previously been treated with a platinum compound, a taxane, bevacizumab, a PARP inhibitor, or a combination thereof.

~~41. The use of any one of claims 1-40, wherein the cancer is a primary platinum refractory.~~

~~42. The use of any one of claims 1-40, wherein the cancer is platinum resistant.~~

~~43. The use of any one of claims 1-16 and 18-40, wherein the cancer is platinum sensitive.~~

~~44. The use of any one of claims 1-43, wherein the cancer is a metastatic cancer or an advanced cancer.~~

40. The use of any one of claims 1-39, wherein the endometrial cancer is recurrent cancer.

~~45.~~41. The use of any one of claims 1-~~44~~40, wherein the administration of the immunoconjugate with the anti-PD-1 antibody or the antigen-binding fragment thereof produces a greater therapeutic benefit than administration of the immunoconjugate alone or the anti-PD-1 antibody or the antigen-binding fragment thereof alone.

~~46.~~42. The use of any one of claims 1-~~45~~41, wherein the administration of the immunoconjugate and the anti-PD-1 antibody or the antigen-binding fragment thereof does not produce more toxicity than administration of the immunoconjugate alone or the anti-PD-1 antibody or the antigen-binding fragment thereof alone.

~~47.~~43. The use of any one of claims 1-~~46~~42, wherein said combination further comprises a steroid.

~~48.~~44. The use of claim ~~47~~43, wherein the steroid is to be administered prior to the administration of the immunoconjugate.

~~49.~~45. The use of claim ~~48~~44, wherein the steroid is to be administered about 30 minutes prior to the administration of the immunoconjugate.

~~50.~~46. The use of any one of claims ~~47~~43-~~49~~45, wherein the steroid is a corticosteroid.

~~51.~~47. The use of any one of claims ~~47~~43-~~50~~46, wherein the steroid is dexamethasone.

~~52.~~48. The use of any one of claims ~~47~~43-~~51~~47, wherein the steroid is to be administered orally, intravenously, or a combination thereof.

~~53.~~49. The use of any one of claims ~~47~~43-~~51~~47, wherein the steroid is to be administered as an eye drop.

~~54.~~50. The use of claim ~~53~~49, wherein the eye drop is a lubricating eye drop.

~~55.~~51. The use of any one of claims 1-~~54~~50, wherein said combination further comprises acetaminophen, diphenhydramine, or a combination thereof.

~~56.~~52. Use of a combination comprising 6 mg/AIBW kg every 3 weeks (Q3W) of an immunoconjugate that binds to FOLR1 and 200 mg of pembrolizumab,

wherein the immunoconjugate that binds to FOLR1 comprises an antibody linked to a maytansinoid DM4 by a sulfo-SPDB linker, wherein the antibody comprises (i) a heavy chain comprising the sequence of SEQ ID NO: 13 and (ii) a light chain comprising the sequence of SEQ ID NO: 15

in the manufacture of a medicament for the treatment of an endometrial cancer ~~platinum resistant epithelial ovarian cancer, a primary peritoneal cancer, or a fallopian tube cancer~~.

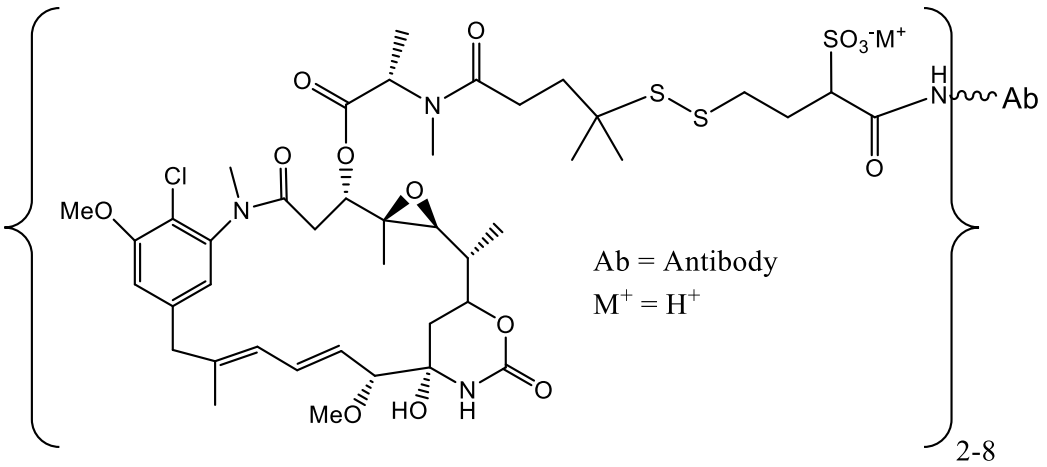
~~57.~~53. Use of a combination comprising 6 mg/AIBW kg Q3W of an immunoconjugate that binds to FOLR1 and 200 mg of pembrolizumab,

wherein the immunoconjugate that binds to FOLR1 comprises an antibody linked to a maytansinoid DM4 by a sulfo-SPDB linker, wherein the antibody comprises (i) a heavy chain comprising the same amino acid sequence as the amino acid sequence of the heavy chain encoded by the plasmid deposited with the American Type Culture Collection (ATCC) as PTA-10772 and (ii) a light chain comprising the same amino acid sequence as the amino acid sequence of the light chain encoded by the plasmid deposited with the ATCC as PTA-10774

in the manufacture of a medicament for the treatment of an endometrial cancer ~~platinum resistant epithelial ovarian cancer, a primary peritoneal cancer, or a fallopian tube cancer~~.

~~58.~~54. The use of claim ~~56~~ 52 or ~~57~~53, wherein the immunoconjugate comprises 1-10, 2-5, or 3-4 maytansinoids per antibody.

~~59.~~55. The use of claim ~~56~~ 52 or ~~57~~53, wherein the immunoconjugate has the following chemical structure:



Ab-sulfo-SPDB-DM4

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wherein “Ab” represents the anti-FOLR1 antibody or ~~antigen-binding~~antigen-binding fragment thereof.

~~60.~~56. The use of claim ~~59~~55, wherein the immunoconjugate comprises 2-5 or 3-4 maytansinoids per antibody.

~~61.~~57. The use of any one of claims ~~56~~52-~~60~~56, wherein at least 25% of cells in a tumor sample that had been obtained from the patient have an FOLR1 IHC score of at least 2.

~~62.~~58. The use of any one of claims ~~56~~52-~~61~~57, wherein the immunoconjugate and the pembrolizumab are to be administered intravenously, and the immunoconjugate is to be administered before the pembrolizumab.

~~63.~~59. The use of any one of claims ~~56~~52-~~62~~58, wherein a steroid is to be administered prior to the administration of the immunoconjugate.

~~64.~~60. The use of any one of claims 1-~~44~~40, wherein said patient has medium or high FRα expression on the endometrial ~~ovarian~~ cancer~~, the peritoneal cancer or the fallopian tube cancer~~.

~~65.~~61. The use of any one of claims 1-~~64~~60, wherein said patient has FOLR1 positive status.