administering to the subject a therapeutically effective amount of a fibroblast growth factor receptor 1 (FGFR1) extracellular domain (ECD) or an FGFR1 ECD fusion molecule. In some embodiments, the subject has previously been administered, or is currently being administered, an ER antagonist or an aromatase inhibitor. In some embodiments, the aromatase inhibitor is selected from aminoglutethimide, testolactone (*e.g.*, Teslac®), anastrozole (*e.g.*, Arimidex®), letrozole (*e.g.*, Femara®), exemestane (*e.g.*, Aromasin®), vorozole (*e.g.*, Rivisor®), formestane (*e.g.*, Lentaron®), megestrol acetate (*e.g.*, Megase®), and fadrozole (*e.g.*, Afema®). Nonlimiting exemplary ER antagonists include tamoxifen (*e.g.*, Nolvadex®, Istabul®, Valodex®) and fulvestrant (*e.g.*, Faslodex®). In some embodiments, the ovarian cancer is estrogen receptor (ER) positive, progesterone (PR) positive, or ER positive and PR positive.

[0006a] In one aspect, there is provided the use of an FGFR1 ECD or an FGFR1 ECD fusion molecule for preparation of a medicament for treatment of lung cancer in a subject, wherein said FGFR1 ECD or an FGFR1 ECD fusion molecule at a dose of at least 5 mg/kg is to be administered in combination ~~either~~ with at least 135 mg/m^2 paclitaxel and at least AUC 4 carboplatin~~, or with at least 40 mg/m^2 docetaxel~~ to the subject.

[0007] In some embodiments, methods of treating lung cancer in a subject are provided. In some embodiments, a method comprises administering at least 5 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule and at least 135 mg/m^2 paclitaxel and at least AUC 4 carboplatin to the subject. In some embodiments, the method comprises administering from 135 mg/m^2 paclitaxel to 200 mg/m^2 paclitaxel, at least 175 mg/m^2 paclitaxel, from 175 mg/m^2 paclitaxel to 200 mg/m^2 paclitaxel, or 200 mg/m^2 paclitaxel. In some embodiments, the method comprises administering from AUC 4 carboplatin to AUC 6 carboplatin, at least AUC 5 carboplatin, from AUC 5 carboplatin to AUC 6 carboplatin, or AUC 6 carboplatin. In some embodiments, the lung cancer is non-small cell lung cancer. In some embodiments, the non-small cell lung cancer is squamous non-small cell lung cancer.

[0008] In some embodiments, a method of treating lung cancer in a subject comprises administering at least 5 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule and at least 40 mg/m^2 docetaxel. In some embodiments, the method comprises administering from 40 mg/m^2 docetaxel to 75 mg/m^2 docetaxel, at least 55 mg/m^2 docetaxel, from 55 mg/m^2 docetaxel to 75 mg/m^2 docetaxel, or 75 mg/m^2 docetaxel. In some embodiments, the lung cancer is non-small cell lung cancer. In some embodiments, the non-small cell lung cancer is squamous non-small cell lung cancer.

[0009] In any of the embodiments described herein, a method may comprise administering from 5 mg/kg to 20 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule, at least 10 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule, from 10 mg/kg to 20 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule, at least 15 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule, from 15 mg/kg to 20 mg/kg of an FGFR1 ECD or an

CLAIMS

1. Use of an FGFR1 ECD or an FGFR1 ECD fusion molecule for preparation of a medicament for treatment of lung cancer in a subject, wherein said FGFR1 ECD or an FGFR1 ECD fusion molecule at a dose of at least 5 mg/kg is to be administered in combination either with at least 135 mg/m^2 paclitaxel and at least AUC 4 carboplatin, or with at least 40 mg/m^2 docetaxel to the subject.

2. The use of claim 1, wherein from 135 mg/m^2 paclitaxel to 200 mg/m^2 paclitaxel, at least 175 mg/m^2 paclitaxel, from 175 mg/m^2 paclitaxel to 200 mg/m^2 paclitaxel, or 200 mg/m^2 paclitaxel is to be administered to the subject.

3. The use of claim 1, wherein from AUC 4 carboplatin to AUC 6 carboplatin, at least AUC 5 carboplatin, from AUC 5 carboplatin to AUC 6 carboplatin, or AUC 6 carboplatin is to be administered to the subject.

4. The use of claim 1, wherein from 40 mg/m^2 docetaxel to 75 mg/m^2 docetaxel, at least 55 mg/m^2 docetaxel, from 55 mg/m^2 docetaxel to 75 mg/m^2 docetaxel, or 75 mg/m^2 docetaxel is to be administered to the subject.

5. The use of any one of claims 1 to 4, wherein from 5 mg/kg to 20 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule, at least 10 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule, from 10 mg/kg to 20 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule, at least 15 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule, from 15 mg/kg to 20 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule, or 20 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule is to be administered to the subject.

6. The use of any one of claims 1 to 5, wherein the lung cancer is non-small cell lung cancer.

7. The use of claim 6, wherein the non-small cell lung cancer is squamous non-small cell lung cancer.

8. The use of any one of claims 1 to 7, wherein at least a portion of the cells of the lung cancer have an *FGFR1* gene amplification.

9. The use of claim 8, wherein at least a portion of the cells of the cancer having *FGFR1* gene amplification comprise at least three copies of the *FGFR1* gene.

10. The use of claim 9, wherein at least a portion of the cells of the cancer having *FGFR1* gene amplification comprise at least four, at least five, at least six, or at least eight copies of the *FGFR1* gene.

11. The use of claim 8, wherein at least a portion of the cells of the cancer having an *FGFR1* gene amplification have a ratio of *FGFR1* gene to chromosome 8 centromere of at

least 1.5.

12. The use of claim 11, wherein the ratio of *FGFR1* gene to chromosome 8 centromere is at least 2, at least 2.5, at least 3, at least 3.5, or at least 4.

13. The use of claim 12, wherein the ratio of *FGFR1* gene to chromosome 8 centromere is greater than 2.

14. The use of any one of claims 8 to 13, wherein *FGFR1* gene amplification was determined by a method selected from fluorescence *in situ* hybridization, array comparative genomic hybridization, DNA microarray, spectral karyotyping, quantitative PCR, southern blotting, or sequencing.

15. The use of any one of claims 1 to 14, wherein at least a portion of the cells of the cancer have FGFR1 overexpression.

16. The use of claim 15, wherein FGFR1 is FGFR1IIIc.

17. The use of any one of claims 1 to 16, wherein at least a portion of the cells of the cancer have FGF2 overexpression.

18. The use of any one of claims 1 to 17, wherein at least a portion of the cells of the cancer have FGFR3 overexpression.

19. The use of claim 18, wherein FGFR3 is FGFR3IIIc.

20. The use of any one of claims 1 to 19, wherein at least a portion of the cells of the cancer overexpress at least one, at least two, or three markers selected from DKK3, FGF18, and ETV4.

21. The use of any one of claims 1 to 20, wherein at least a portion of the cells of the cancer overexpress at least one or two markers selected from DKK3 and FGF18.

22. The use of any one of claims 1 to 21, wherein at least a portion of the cells of the cancer overexpress ETV4.

23. The use of any one of claims 15 to 22, wherein the cancer does not have an FGFR1 gene amplification.

24. The use of any one of claims 15 to 22, wherein the overexpression is protein overexpression.

25. The use of claim 24, wherein protein overexpression is determined using immunohistochemistry.

26. The use of any one of claims 15 to 22, wherein the overexpression is mRNA overexpression.

27. The use of claim 26, wherein mRNA overexpression is determined using quantitative RT-PCR.

28. The use of any one of claims 1 to 27, wherein the FGFR1 ECD comprises an

amino acid sequence selected from SEQ ID NOs: 1 to 4.

29. The use of any one of claims 1 to 28, wherein the FGFR1 ECD fusion molecule comprises an FGFR1 ECD and a fusion partner, and wherein the fusion partner is Fc.

30. The use of claim 29, wherein the FGFR1 ECD fusion molecule comprises a sequence selected from SEQ ID NO: 5 and SEQ ID NO: 6.

CLAIMS

1. Use of an FGFR1 ECD or an FGFR1 ECD fusion molecule for preparation of a medicament for treatment of lung cancer in a subject, wherein said FGFR1 ECD or an FGFR1 ECD fusion molecule at a dose of at least 5 mg/kg is to be administered in combination with at least 135 mg/m^2 paclitaxel and at least AUC 4 carboplatin to the subject.

2. The use of claim 1, wherein from 135 mg/m^2 paclitaxel to 200 mg/m^2 paclitaxel, at least 175 mg/m^2 paclitaxel, from 175 mg/m^2 paclitaxel to 200 mg/m^2 paclitaxel, or 200 mg/m^2 paclitaxel is to be administered to the subject.

3. The use of claim 1, wherein from AUC 4 carboplatin to AUC 6 carboplatin, at least AUC 5 carboplatin, from AUC 5 carboplatin to AUC 6 carboplatin, or AUC 6 carboplatin is to be administered to the subject.

4. The use of any one of claims 1 to 3, wherein from 5 mg/kg to 20 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule, at least 10 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule, from 10 mg/kg to 20 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule, at least 15 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule, from 15 mg/kg to 20 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule, or 20 mg/kg of an FGFR1 ECD or an FGFR1 ECD fusion molecule is to be administered to the subject.

5. The use of any one of claims 1 to 4, wherein the lung cancer is non-small cell lung cancer.

6. The use of claim 5, wherein the non-small cell lung cancer is squamous non-small cell lung cancer.

7. The use of any one of claims 1 to 6, wherein at least a portion of the cells of the lung cancer have an *FGFR1* gene amplification.

8. The use of claim 7, wherein at least a portion of the cells of the cancer having *FGFR1* gene amplification comprise at least three copies of the *FGFR1* gene.

9. The use of claim 8, wherein at least a portion of the cells of the cancer having *FGFR1* gene amplification comprise at least four, at least five, at least six, or at least eight copies of the *FGFR1* gene.

10. The use of claim 7, wherein at least a portion of the cells of the cancer having an *FGFR1* gene amplification have a ratio of *FGFR1* gene to chromosome 8 centromere of at least 1.5.

11. The use of claim 10, wherein the ratio of *FGFR1* gene to chromosome 8 centromere is at least 2, at least 2.5, at least 3, at least 3.5, or at least 4.

12. The use of claim 11, wherein the ratio of *FGFR1* gene to chromosome 8

centromere is greater than 2.

13. The use of any one of claims 7 to 12, wherein *FGFR1* gene amplification was determined by a method selected from fluorescence *in situ* hybridization, array comparative genomic hybridization, DNA microarray, spectral karyotyping, quantitative PCR, southern blotting, or sequencing.

14. The use of any one of claims 1 to 13, wherein at least a portion of the cells of the cancer have FGFR1 overexpression.

15. The use of claim 14, wherein FGFR1 is FGFR1IIIc.

16. The use of any one of claims 1 to 15, wherein at least a portion of the cells of the cancer have FGF2 overexpression.

17. The use of any one of claims 1 to 16, wherein at least a portion of the cells of the cancer have FGFR3 overexpression.

18. The use of claim 17, wherein FGFR3 is FGFR3IIIc.

19. The use of any one of claims 1 to 18, wherein at least a portion of the cells of the cancer overexpress at least one, at least two, or three markers selected from DKK3, FGF18, and ETV4.

20. The use of any one of claims 1 to 19, wherein at least a portion of the cells of the cancer overexpress at least one or two markers selected from DKK3 and FGF18.

21. The use of any one of claims 1 to 20, wherein at least a portion of the cells of the cancer overexpress ETV4.

22. The use of any one of claims 14 to 21, wherein the cancer does not have an FGFR1 gene amplification.

23. The use of any one of claims 14 to 21, wherein the overexpression is protein overexpression.

24. The use of claim 23, wherein protein overexpression is determined using immunohistochemistry.

25. The use of any one of claims 14 to 21, wherein the overexpression is mRNA overexpression.

26. The use of claim 25, wherein mRNA overexpression is determined using quantitative RT-PCR.

27. The use of any one of claims 1 to 26, wherein the FGFR1 ECD comprises an amino acid sequence selected from SEQ ID NOs: 1 to 4.

28. The use of any one of claims 1 to 27, wherein the FGFR1 ECD fusion molecule comprises an FGFR1 ECD and a fusion partner, and wherein the fusion partner is Fc.

29. The use of claim 28, wherein the FGFR1 ECD fusion molecule comprises a sequence selected from SEQ ID NO: 5 and SEQ ID NO: 6.