~~New PCT Patent Application~~
~~based on EP 10 17 0004.5~~
~~F. Hoffmann-La Roche AG~~
~~Our Ref.: S1945 PCT S3~~

Claims

~~1. A method for improving the treatment effect of a chemotherapy regimen of a patient suffering from pancreatic cancer by adding bevacizumab to said chemotherapy regimen, said method comprising:~~

~~(a) determining the protein expression level of one or more of VEGFA, VEGFR2 and PLGF in a patient sample; and~~

~~(b) administering bevacizumab in combination with a chemotherapy regimen to the patient having an increased expression level of one or more of VEGFA, VEGFR2 and PLGF relative to control expression levels determined in patients diagnosed with pancreatic cancer.~~

21. An in vitro method for the identification of a patient responsive to or sensitive to the addition of bevacizumab treatment to a chemotherapy regimen, said method comprising determining the protein expression level of one or more of VEGFA, VEGFR2 and PLGF in a sample from a patient suspected to suffer from or being prone to suffer from pancreatic cancer, whereby an increased expression level of one or more of VEGFA, VEGFR2 and PLGF relative to control expression levels determined in patients suffering from pancreatic cancer is indicative of a sensitivity of the patient to the addition of bevacizumab to said chemotherapy regimen; wherein the pancreatic cancer is metastatic pancreatic cancer; the chemotherapy regimen comprises gemcitiabine and erlotinib; and the sample is a blood plasma sample.

~~3. Use of bevacizumab for improving the treatment effect of a chemotherapy regimen of a patient suffering from pancreatic cancer comprising the following steps:~~

~~(a) determining the protein expression level of one or more of VEGFA, VEGFR2 and PLGF in a patient sample; and~~

~~(b) administering bevacizumab in combination with a chemotherapy regimen to the patient having an increased expression level of one or more of VEGFA, VEGFR2 and PLGF relative to control expression levels determined in patients diagnosed with pancreatic cancer.~~

42. An in vitro method of predicting the response to or sensitivity to the addition of bevacizumab to a chemotherapy regimen of a patient suspected to suffer from, suffering from or prone to suffer from pancreatic cancer comprising determining the protein expression level of one or more of VEGFA, VEGFR2 and PLGF in a patient sample; wherein the pancreatic cancer is metastatic pancreatic cancer; the chemotherapy regimen comprises gemcitiabine and erlotinib; and the sample is a blood plasma sample.

~~5. Use of specific probes for the preparation of a diagnostic composition for predicting the response to or sensitivity to the addition of bevacizumab to a chemotherapy regimen of a patient suffering from, suspect to suffer from or prone to suffer from pancreatic cancer comprising determining the expression level of one or more of VEGFA, VEGFR2 and PLGF in a patient sample, wherein said probes are capable of detecting one or more of VEGFA, VEGFR2 and PLGF.~~

~~6. The use of claim 5 wherein the probes are binding molecules like antibodies.~~

73. The method ~~or use~~ of ~~any one of~~ claims 1 ~~to 3~~or 2, wherein the treatment effect is progression-free survival.

84. The method ~~or use~~ of ~~any one of~~ claims 1 ~~to 3~~or 2, wherein the treatment effect is overall survival.

95. The method ~~or use~~ of ~~any one of~~ claims ~~4 to 7~~2 or 3, wherein the protein expression level determined is of VEGFA or PLGF.

~~10~~6. The method ~~or use~~ of any one of claims 2 to ~~4 to 6 and 8~~, wherein the protein expression level determined is of VEGFA or VEGFR2.

~~11~~7. The method ~~or use~~ of any one of claims 1 to ~~8~~4, wherein protein expression level determined is a combined expression level of VEGFA and VEGFR2 .

~~12~~8. The method ~~or use~~ of any one of claims 1 to ~~8~~4, wherein the protein expression level determined is a combined expression level of VEGFA and PLGF.

~~13~~9. The method ~~or use~~ of any one of claims 1 to ~~8~~4, wherein the protein expression level determined is a combined expression level of VEGFA, VEGFR2 and PLGF.

~~14~~10. The method ~~or use~~ of any one of claims 1 to ~~13~~9, wherein said expression level is detected by an immunoassay method.

~~15~~11. The method ~~or use~~ of claim ~~14~~10, wherein said immunoassay method is ELISA.

~~16. The method or use of any one of claims 1 to 15, wherein said patient sample is a blood plasma sample.~~

~~17. The method or use of any one of claims 1 to 16, wherein said patient sample is a blood plasma sample.~~

~~18. The method or use of any one of claims 1 to 17, wherein the pancreatic cancer is metastatic pancreatic cancer.~~

~~19. The method or use of claims 18, wherein said chemotherapy regimen comprises gemcitabine and erlotinib.~~

~~20~~12. The method ~~or use~~ of any one of claims 1 to ~~19~~11, wherein said patient is being co-treated with one or more anti-cancer therapies.

~~21~~13. The method ~~or use~~ of claim ~~20~~12, wherein said anti-cancer therapy is radiation.

~~22~~14. The method ~~or use~~ of any one of claims 1 to ~~21~~13, wherein said sample is obtained before neoadjuvant or adjuvant therapy.

~~23~~15. The method ~~or use~~ of any one of claims 1 to ~~21~~13, wherein said samples is obtained after neoadjuvant or adjuvant therapy.

~~24. A kit useful for carrying out the method of any one of claims 1 to 23, comprising~~

polypeptides capable of determining the expression level of one or more of VEGFA, VEGFR2 and/or PLGF.

25. Use of a polypeptide for determining the expression level of one or more of VEGFA, VEGFR2 and/or PLGF in any one of claims 1 to 23.

26. The kit of claim 24 or the use of claim 25 comprising a polypeptide capable of determining the expression level of one or more of VEGFA, VEGFR2 and/or PLGF, wherein said polypeptide is suitable for use in an immunoassay method and/or is an antibody specific for VEGFA, VEGFR2 or PLGF.