Cobimetinib

Cobimetinib (trade name **Cotellic**) is a MEK inhibitor developed by Exelixis and Genentech. It is used in combination with vemurafenib, a BRAF inhibitor, to treat melanoma. In November 2015, the U.S. Food and Drug Administration approved cobimetinib for unresectable or metastatic melanoma with a BRAF V600E or V600K mutation, in combination with vemurafenib (Zelboraf). Cobimetinib is not indicated for treatment of patients with wild-type BRAF melanoma.[4]

Cobimetinib in combination with vemurafenib is reportedly priced at $17,600 per month, or about $211,000 per year.[5] A competing dual therapy, using dabrafenib along with trametinib, is also approved by the FDA,[6] and is reported to cost $15,300 monthly, or $183,600 per year.[5]

1 Medical use

Cobimetinib is approved for use in combination with vemurafenib (trade name Zelboraf) for the treatment of advanced melanoma that cannot be removed by surgery or which has spread to other parts of the body, provided that the melanoma has an abnormal gene, with a mutation of BRAF (either V600E or V600K).[1][7]

2 Adverse effects

Common adverse effects observed in cobimetinib and vemurafinib co-treated persons in clinical trials included diarrhea, nausea, vomiting, rash, photosensitivity, and pyrexia.[8]

3 Clinical trials

Acquired resistance to BRAF inhibitors, such as vemurafenib and dabrafenib, commonly occurs after a several months of progression-free tumor response. Preclinical data indicated the involvement of MAPK pathways and MAPK-independent signaling in the developed resistance, suggesting dual inhibition of MEK and BRAF kinase as a strategy for increasing the longevity of tumor response seen with BRAF inhibition alone. In phase III clinical trials, the combination of cobimetinib and vemurafenib was tested in patients with BRAFV600-mutated metastic melanoma, which resulted in significant improvement in progression-free survival in patients, but also produced some increase in toxicity. The combination increased progression-free survival to an average of 12.3 months, compared to 7.2 months for vemurafenib alone. This clinical data also showed that the combination treatment resulted in 65% survival rate of patients 17 months after beginning the treatment, increased rates from the 50% of patients on vemurafenib treatment alone. Adding cobimetinib also increased the median overall survival to 25.6 months, compared to the 18 months for vemurafenib alone.[5][8]

4 References

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5 External links

- Cotellic (cobimetinib) Official Web Site
- Highlights of prescribing information

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