Pharmacotherapeutic report, summary

Eribulin (Halaven®) for the indication 'patients with locally advanced or metastatic breast cancer'.

Approved on 27-8-12 by the Medicinal Products Reimbursement Committee (CFH)

Medicine. Eribulin mesilate

Registered indication. "Patients with locally advanced or metastatic breast cancer who have progressed after at least two chemotherapeutic regimens for advanced disease. Prior therapy should have included an anthracycline and taxane, unless patients were not suitable for these treatments."

Posology. The recommended dose is 1.23 mg/m^2 (equivalent of 1.4 mg/m^2 eribulin mesilate) which should be administered intravenously over 2 to 5 minutes on Days 1 and 8 of every 21-day cycle.

Mechanism of action. Eribulin is a non-taxane microtubule dynamics inhibitor belonging to the halichondrin class of antineoplastic agents. Eribulin inhibits the growth phase of microtubules without affecting the shortening phase and sequesters tubulin into nonproductive aggregates. Eribulin exerts its effects via a tubulin-based antimitotic mechanism leading to G_2/M-cell-cycle block, disruption of mitotic spindles and, ultimately, apoptotic cell death after prolonged mitotic blockage.

Summary of the therapeutic value

Intended effects. Treatment with eribulin in patients with progressive or metastatic breast cancer who have undergone 2 to 5 prior chemotherapeutic regiments leads to a significantly greater general survival in comparison with 'treatment of physician's choice' (TPC). This leads to the conclusion that, on average, eribulin is more effective than TPC. However, based on this comparison, eribulin cannot be said to be the most effective treatment in comparison with all the various treatment options of the TPC arm, nor for all indicated lines of treatment.

Unintended effects. The side effects of eribulin are comparable with those of the treatments in the TPC arm. However, eribulin does lead to more frequent side effects than TPC, but not to a difference in patients who stop treatment or die as a result of the treatment.

Experience. Experience with eribulin is limited, while ample experience has been gained with the treatments in the TPC arm.

Applicability. The applicability of eribulin is limited due to interactions, contraindications and the necessity of monitoring. No information is available for certain specific groups. The applicability of eribulin is equal to that of most of the treatments in the TPC arm.

Ease of use. There are no major differences between eribulin (i.v.) and most of the treatments in the control (TPC) arm, with the exception of capecitabine which can be administered orally.

Final conclusion on therapeutic value.

In the treatment of locally advanced or metastatic breast cancer in third line treatment (or later), the positioning of eribulin is complex because these patients have differing receptor status, prior treatment and possible variations in types, locations, numbers and sizes of metastases. The use of eribulin leads more frequently to severe unintended effects than the use of TPC. This does not, however, lead to a difference in the number of patients who stop treatment or die as a consequence of the treatment. The therapeutic added value of eribulin is equal to that of TPC. Based on this comparison, however, it is impossible to say whether eribulin is the most effective treatment in comparison with of all the different treatment options from the TPC arm, or for all indicated lines of treatment. This means that eribulin cannot be regarded as a replacement for individual treatments from the TPC arm.

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