# National multicentre retrospective study on metastatic breast cancer patients to characterize long responder under eribulin – LORELINE study #326P

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## BACKGROUND

Eribulin can represent a therapeutic alternative for advanced breast cancer patients (pts) who have received at least one or two lines of anthracyclines and taxanes based chemotherapy. According to the Transparency Commission of the High Authority of Health, Eribulin administered as monotherapy, in the third line of treatment and beyond, represents a therapeutic option by improving the medical service rendered compared to capecitabine and vinorelbine. In this retrospective study, we focused on long responder pts, i.e. with objective response or stability ≥ 6 months under eribulin to better characterize them [1-4].

## MATERIALS & METHODS

Metastatic breast cancer pts treated by eribulin in 2nd, 3rd or 4th line of treatment between Sep-2011 and June-2018 were selected. The following parameters were assessed: primary tumor and metastasis characteristics, type of response and duration, disease progression, treatment received, toxicities, survival (progression free survival (PFS), overall survival (OS)) and predictive factors of PFS. A special focus was set on pts with hepatic disease (HD).

## RESULTS

- Overall, 98 patients were included in LORELINE study from Aug 2019 to Nov 2020 in 9 centers in France and analysis was conducted on 84 patients. 14 pts were excluded from analysis because they were wrongly included.

### Table 1. Patients characteristics

| Characteristics | No. of patients, % |
|---|---|
| Median age (years) [range] | 62 [36 – 75] |
| TNM stage at diagnosis | |
| I | 10 (13.5) |
| II | 30 (40.5) |
| III | 16 (21.6) |
| IV | 18 (24.3) |
| Hormone receptor status positive | 75 (89) |
| Triple negative tumor | 5 (6.2) |
| Treatments received prior eribulin | |
| Neoadjuvant | 20 (24.1) |
| Adjuvant | 61 (72.6) |
| Visceral disease | 68 (81) |
| Hepatic | 59 (87) |
| Treatment line no. of eribulin | |
| 2 | 18 (21.4) |
| 3 | 37 (44) |
| 4 | 29 (34.5) |

- Complete response (CR), partial response (PR) and stable disease (SD) were observed respectively for 2.4%, 46.4% and 51.2% of pts.
- The median duration of response was 25.6 weeks (95% CI 22-27.7) with a median number of infusions of 6.
- Response was similar irrespective of eribulin line number. HD was observed in 70.2% of pts with 3.4% of CR, 50.8% of PR and 45.8% of SD.
- The most common adverse events (AEs) observed were neutropenia, asthenia, neuropathy and anemia. The most common grade ≥ 3 AEs were neutropenia, neuropathy, nausea and vomiting (Figure 1).

### Figure 1. Most common adverse events
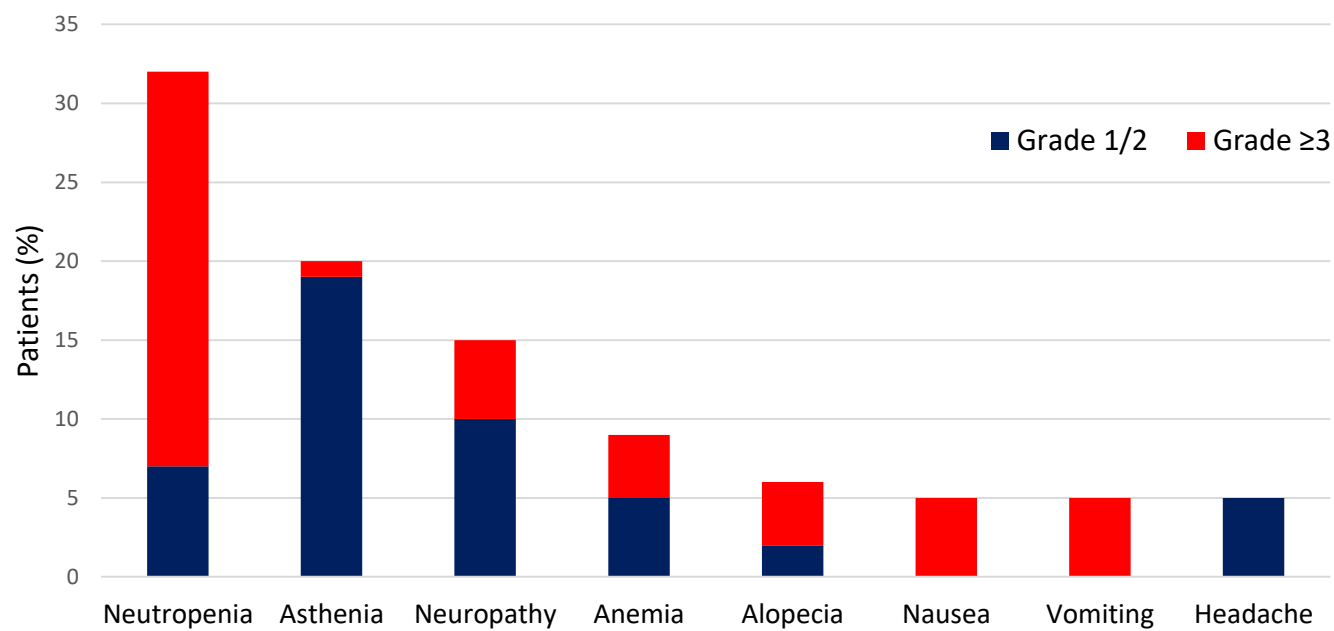


- The median OS was 24 mo. (95% CI 20-31) and the median PFS was 9 mo. (95% CI 8-10).

### Table 2. Summary of survival by subgroups

| Subgroups | PFS | | OS | |
|---|---|---|---|---|
| | Event (%) | Median (mo.) (95% CI) | Event (%) | Median (mo.) (95% CI) |
| All (n=84) | 82 (98) | 9 (8-10) | 76 (90) | 24 (20-31) |
| HD (n=59) | 57 (97) | 8 (7-10) | 52 (88) | 24 (19-32) |
| Eri. 2nd line (n=18) | 16 (89) | 8 (7-48) | 15 (83) | 31 (24-50) |
| Eri. 3rd line (n=37) | 37 (100) | 9 (8-12) | 34 (92) | 26 (21-35) |
| Eri. 4th line (n=29) | 29 (100) | 9 (7-12) | 27 (93) | 18 (17-26) |

- Subgroup analysis showed similar OS irrespective of hepatic disease (p=0.79) and treatment line (p=0.09). Subgroup analysis showed also similar PFS irrespective of hepatic disease (p=0.21) (Fig. 2) and treatment line (p=0.46) (Fig. 3).

### Figure 2. PFS depending on the presence/absence of liver metastasis
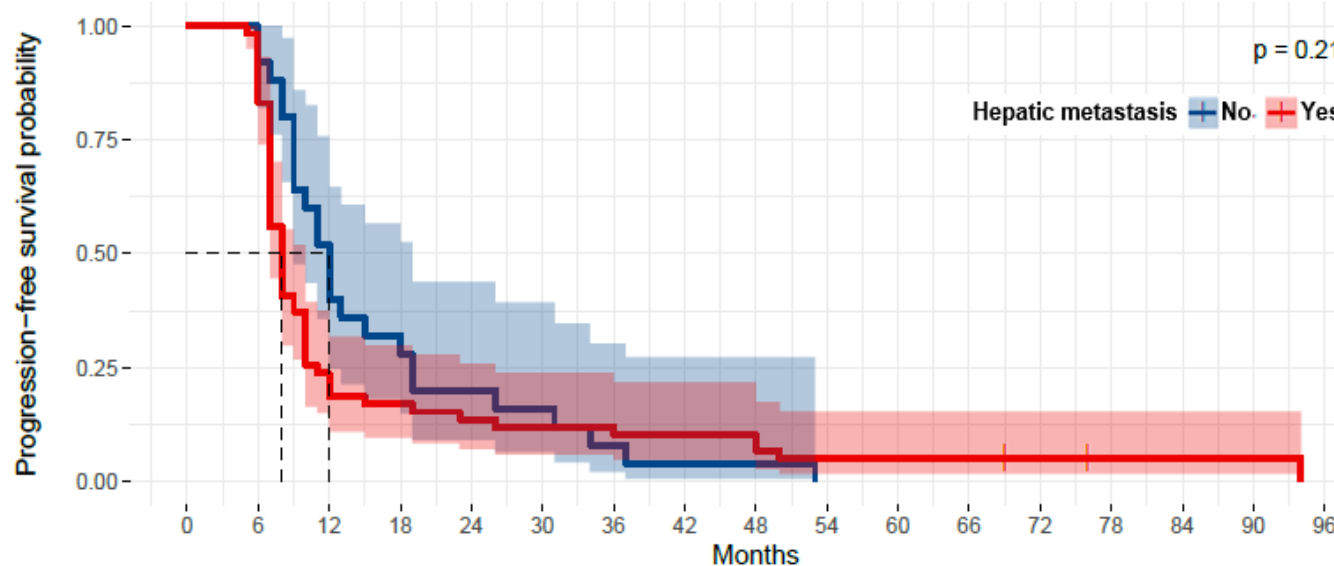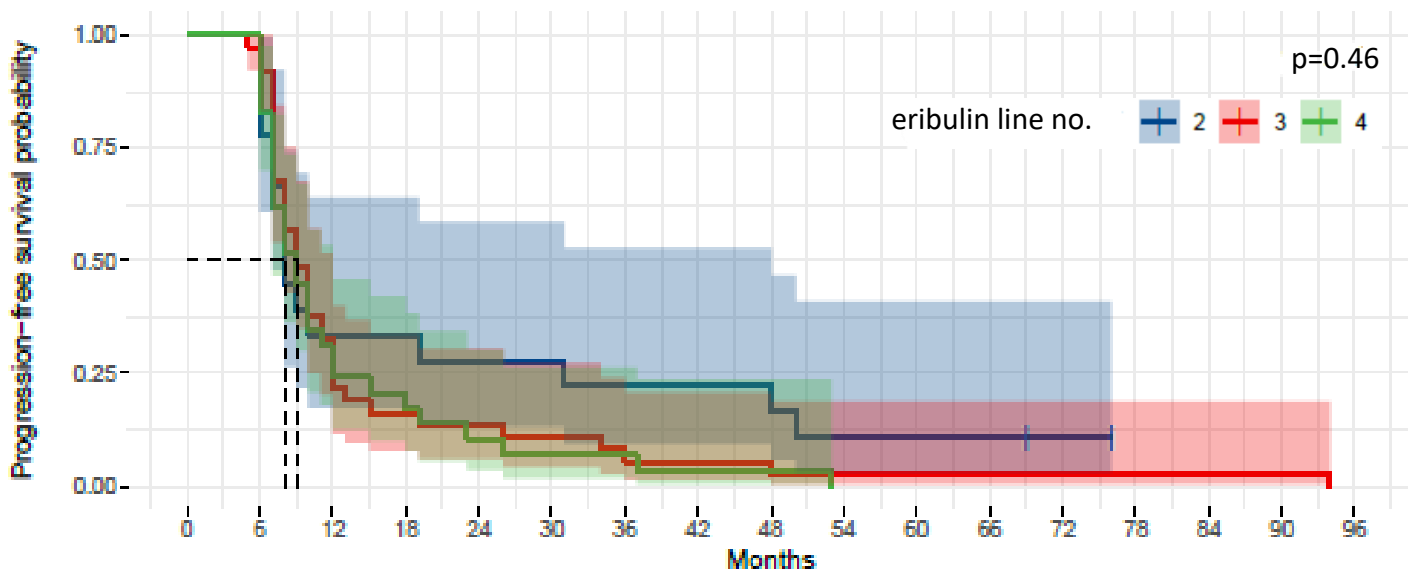


### Figure 3. PFS by eribulin line number



- Predictive factors of PFS in univariate analysis were progesterone receptor expression (p=0.014), number of ERI infusions (p=0.011) and duration of response (p<0.001); in multivariate analysis the main predictive factor was duration of response (p=0.003). The same predictive factors were found for pts with HD.

## CONCLUSIONS

Long responder pts under eribulin had a median duration of response of 25.6 weeks with a median number of infusions of 6. Response to eribulin and PFS were independent of presence of hepatic metastasis and eribulin line number. The duration of response, number of line by eribulin and positive progesterone receptor are the main predictive factors of PFS in our cohort and in pts with HD.

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