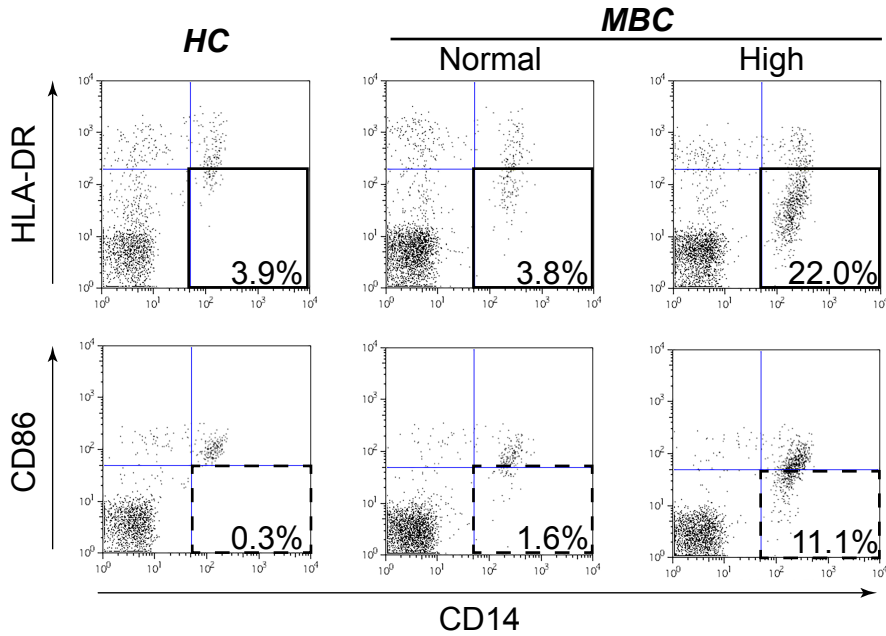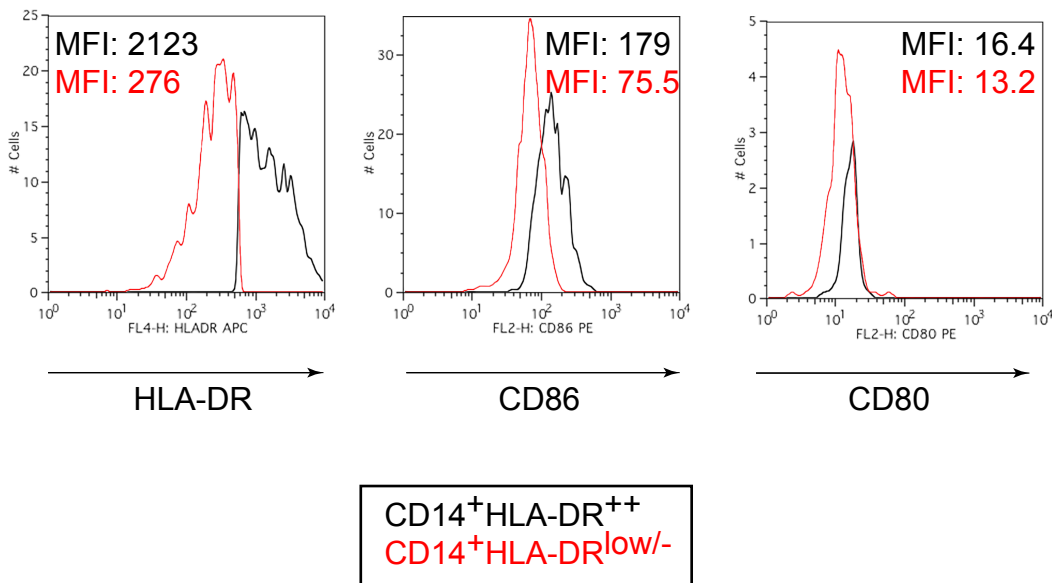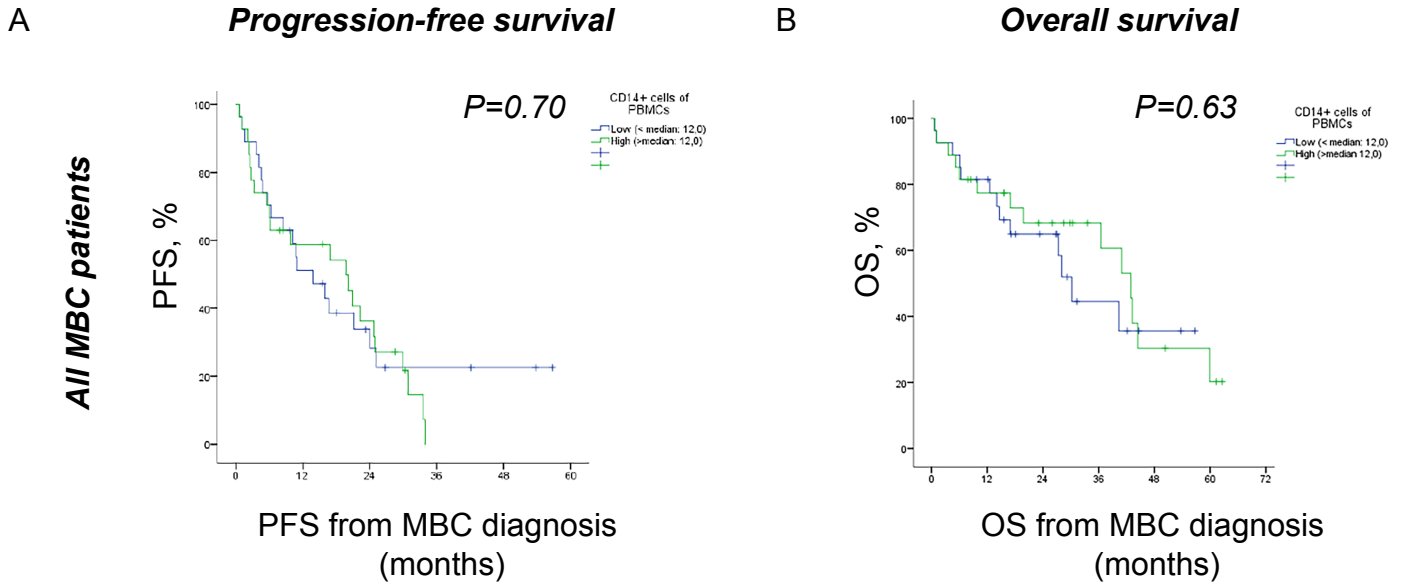A
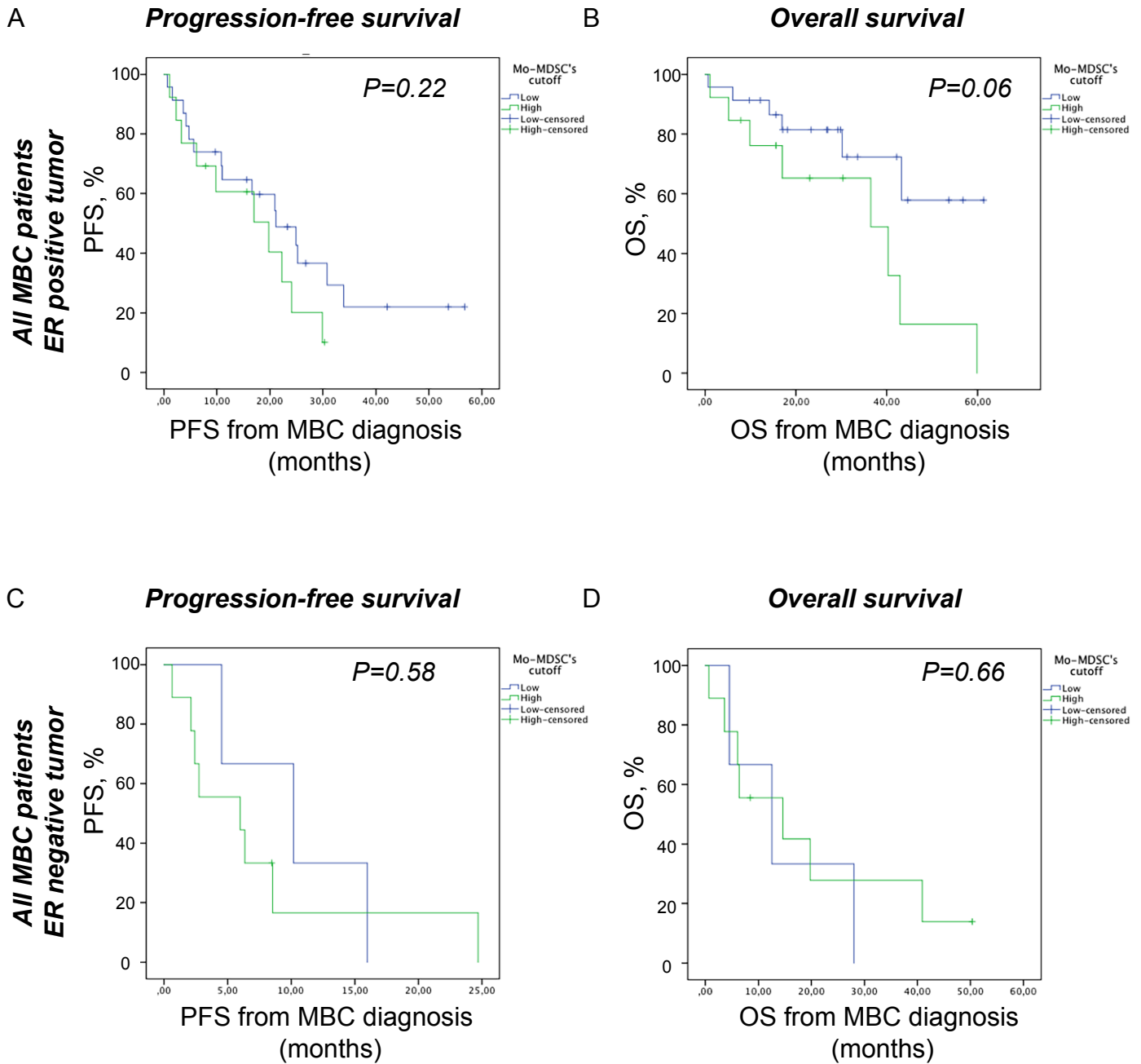

B

Supplementary Figure 1. Flow cytometric analyzes of CD14+HLA-DRlow/- and CD14+HLA-DR++ cells. (**A**) Representative dot plots of CD14, HLA-DR and co-receptor CD86, gated on all viable PBMCs. Mo-MDSCs were defined as CD14+HLA-DRlow/- cells (black box). All CD14+HLA-DRlow/- cells had lower expression of CD86 (dashed box) as compared to CD14+HLA-DR++ cells. (**B**) Representative histograms of mean fluorescence intensity (MFI) for HLA-DR, CD86 and CD80 in CD14+HLA-DR++ (black) and CD14+HLA-DRlow/- (red) cells.

A **_Progression-free survival_**   B **_Overall survival_**

Supplementary Figure 2. Monocyte levels and associations to survival. (A-B) Kaplan-Meier curves of progression-free survival (PFS; A) and overall survival (OS; B) according to the monocyte levels (all CD14^{+} cells), divided by median level of monocytes, 12.0 % of PBMCs, in all MBC patients (*n*=54). Median PFS in low and high group was 13.8 months (95% CI 5.7-21.9) and 19.7 months (95% CI 7.7-31.8), respectively. Median OS in low and high group was 30.2 months (95% CI 25.4-34.9) and 42.9 months (95% CI 35.7-50.1), respectively. Statistics by Log-rank test.

Supplementary Figure 3. Mo-MDSC levels and associations to survival in all MBC patients stratified for tumor ER status. Kaplan Meier curves of progression-free (PFS) and overall survival (OS) in relation to Mo-MDSC levels in MBC patients with ER positive (*n*=36, **A-B**) versus ER negative (*n*=12, **C-D**) disease. Statistics by log rank test.

Supplementary Table 1. Table illustrating previous adjuvant therapy (chemotherapy and endocrine therapy) for early breast cancer in 42 patients diagnosed with distant recurrent MBC. [a] Statistics by Pearson Chi Square test. [b] Statistics by Fisher's exact test.

Type of therapy		Normal Mo-MDSCs n=26	High Mo-MDSCs n=16	P value
Chemotherapy	Yes	11	10	0.20[a]
	No	15	6	
	Unknown	0	0	
Endocrine therapy	Yes	22	12	0.45[b]
	No	4	4	
	Unknown	0	0	
Endocrine therapy at MBC diagnosis	Yes	10	3	0.30[b]
	No	14	12	
	Unknown	2	1	