



PSMA PET/CT Stage Migration and Genomic Classifier Scores in High-Risk Prostate Cancer: First-Year Results from the THUNDER Trial (NCT06282588)

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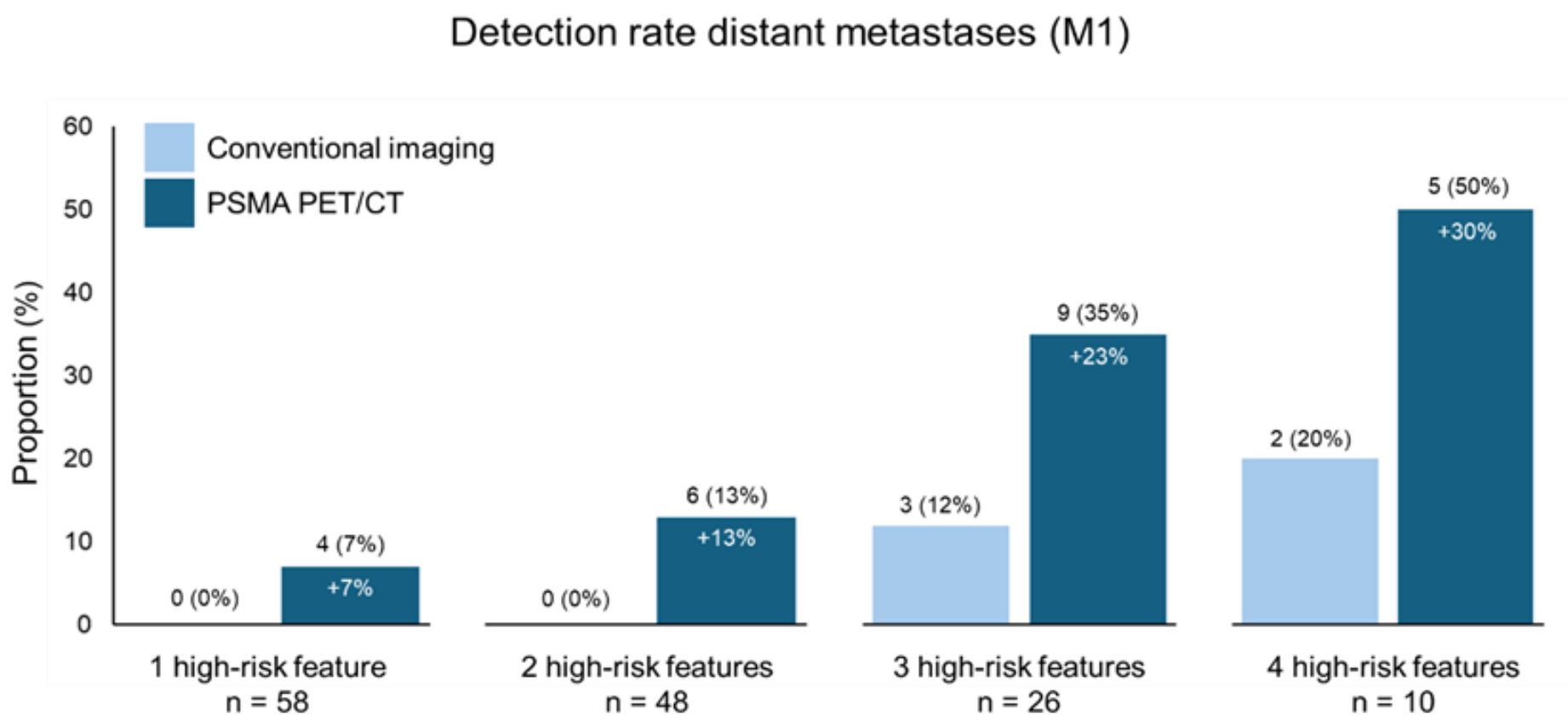
INTRODUCTION

- ProPSMA trial: PSMA PET/CT upstaged 8% of high-risk prostate cancer patients from M0 to M1 disease [1].
- Decipher prostate genomic classifier (GC) scores are prognostic, with 42% of patients scoring >0.85 developing distant metastases within 10 years [2].
- The phase 2/3 THUNDER trial is investigating whether treatment adaptation based on PSMA PET/CT and GC scores improves metastasis-free survival in high-risk prostate cancer.
- This prospective substudy analysed stage migration on PSMA PET/CT compared to conventional imaging, and the correlation between GC scores and PSMA PET/CT findings in patients screened in the first year of the THUNDER trial (13-12-2023 to 12-12-2024).

RESULTS

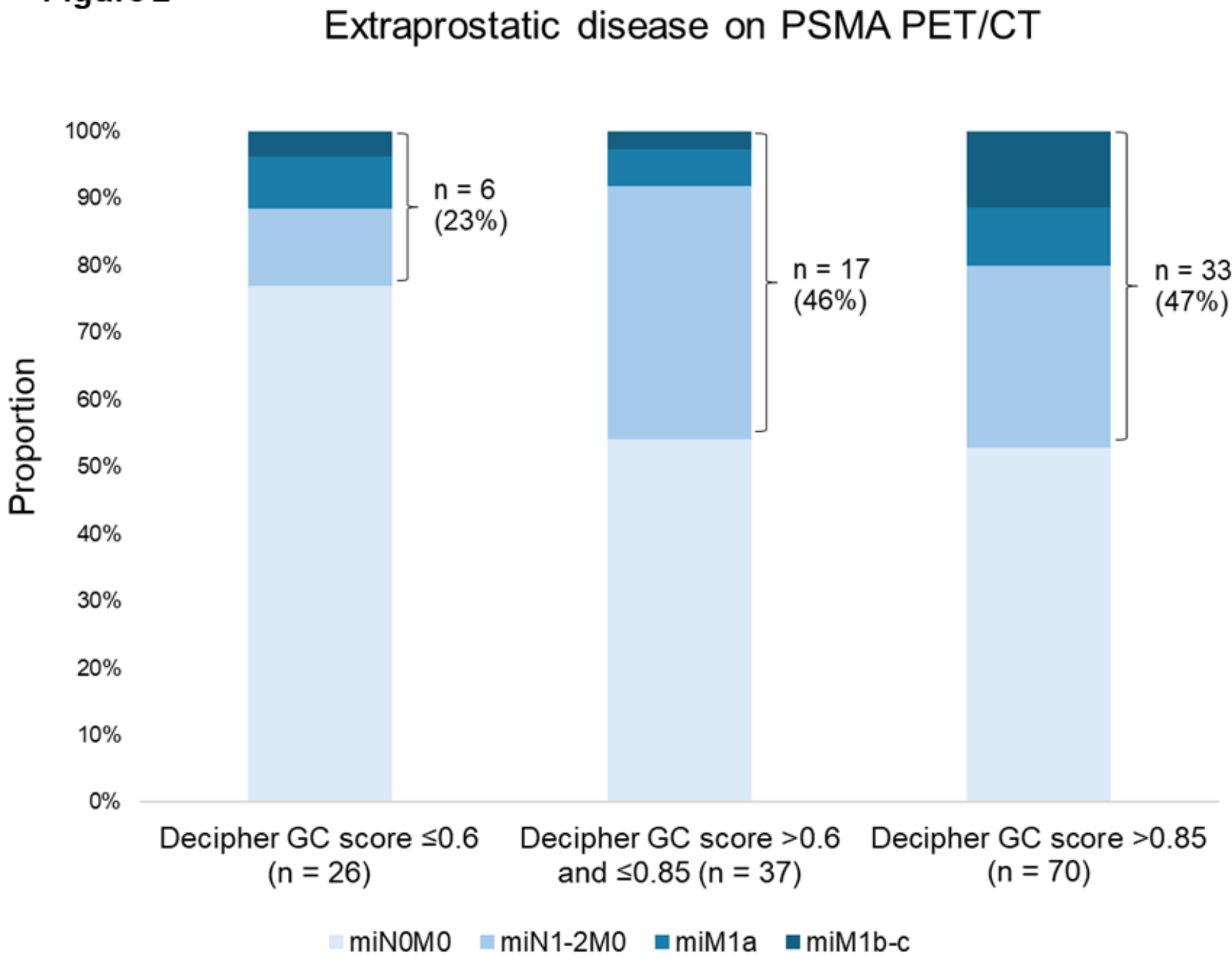
- Patient characteristics: 38% PSA >20 ng/ml, 61% T-stage 3-4, 73% ISUP grade 4-5, 19% cN1 disease.
- PSMA PET/CT upstaged 42 patients (30%), with N1 upstaging in 23% and M1 upstaging in 13%. Downstaging occurred in 1 patient (1%).
- Upstaging risk increased with more high-risk features.

Figure 1



- GC score was significantly associated with extra-prostatic disease (OR=1.29 [1.05-1.58] per 0.1 increase, p=0.016), independent of PSA and ISUP grade.

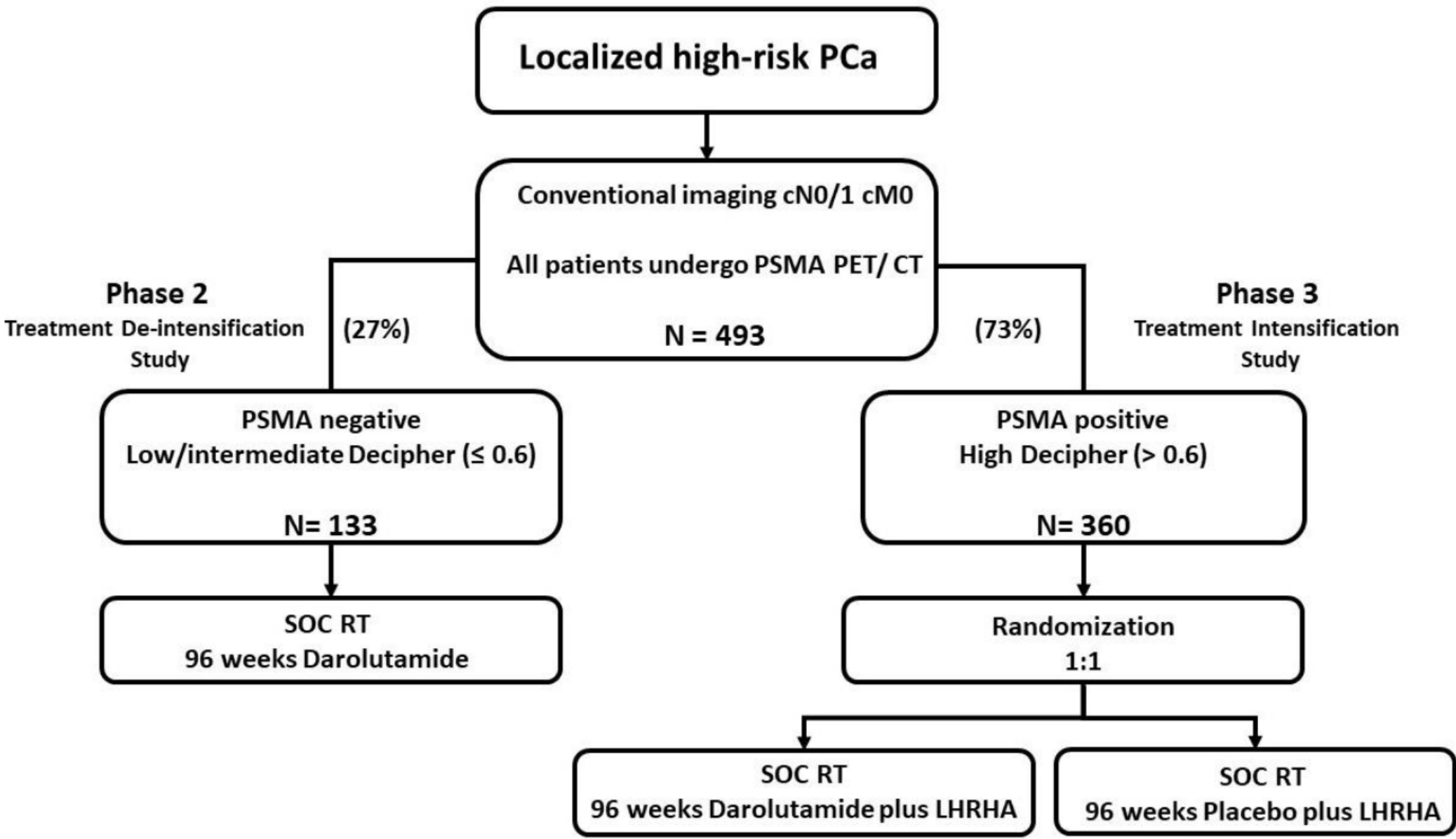
Figure 2



CONCLUSION

- We extended previous findings of PSMA PET/CT stage migration and GC scores to a very high-risk prostate cancer cohort.
- PSMA PET/CT upstaged 30% of patients, and upstaging increased with number of risk factors and GC score.
- Interestingly, over half of patients with a GC score >0.85 did not have extraprostatic disease on PSMA PET/CT.
- The THUNDER trial will assess PSMA- and GC-guided treatment adaptation strategies.

THUNDER study flowchart



[1] Hofman et al. Lancet. 2020. doi:10.1016/S0140-6736(20)30314-7.
[2] Nguyen et al. Int J Radiat Oncol Biol Phys. 2023. doi:10.1016/j.ijrobp.2022.12.035.
[3] Seifert R, et al. Eur Urol. 2023. doi:10.1016/j.eururo.2023.02.002.