Prognostic Nutritional Index Predicts Primary Resistance to Treatment and prognosis in mCRPC Patients Treated with Abiraterone
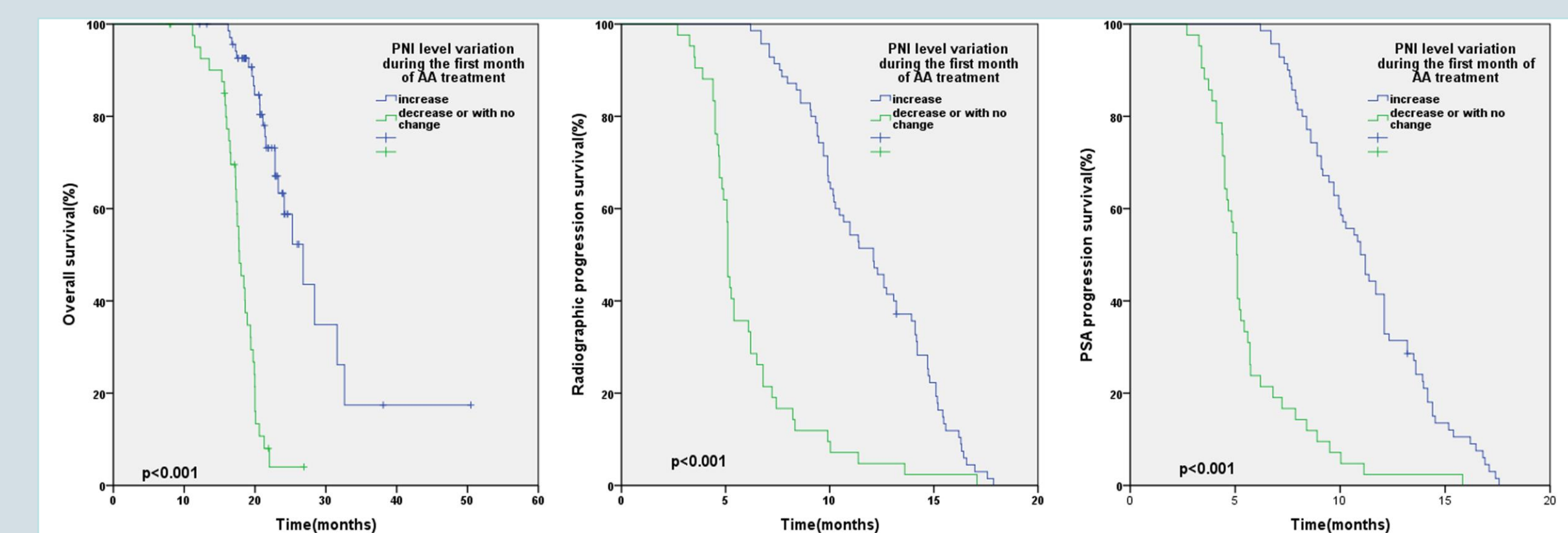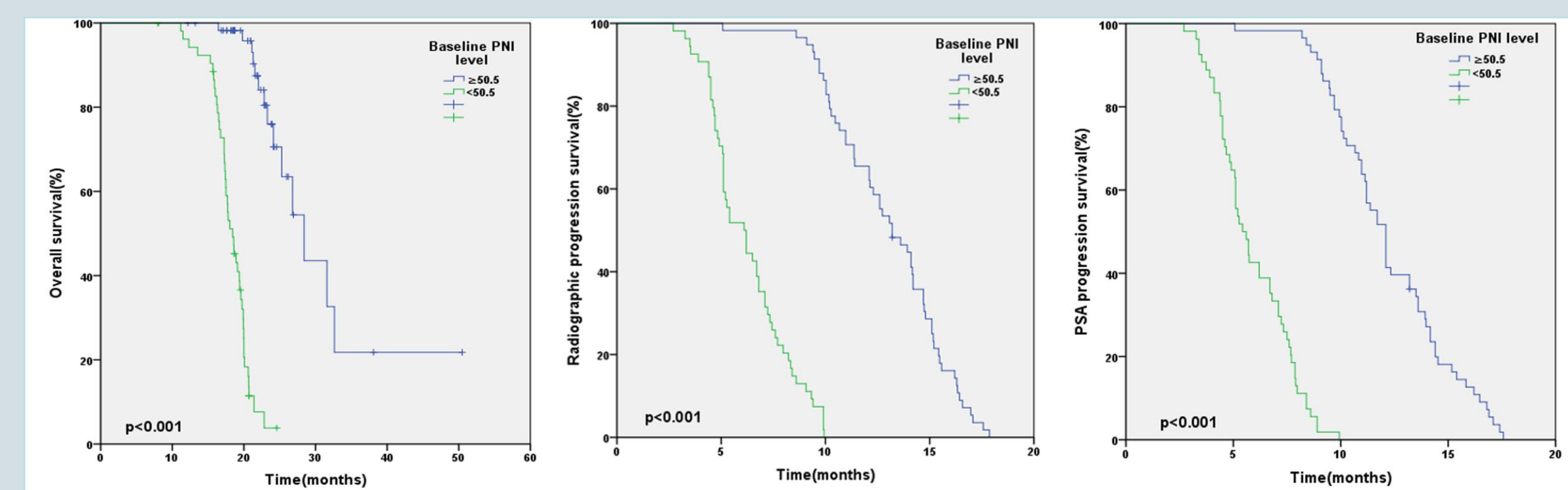
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Objectives

Owing to the existence of PSA flare, judging primary resistance to Abiraterone (AA) only by PSA evaluation seemed to be unreliable. This study was to determine if prognostic nutritional index (PNI) and its variation could predict primary resistance to AA and prognosis in mCRPC.

Results 2

In multivariate Cox regression analysis, low PNI level remained significant predictors of OS, rPFS and PSA-PFS. The estimated c-index of the multivariate model for OS increased from 0.82 without PNI to 0.83 when PNI added.

Methods

112 chemotherapy pretreated or chemotherapy-naive patients were scheduled for systemic treatment with AA. PNI levels were measured before and after one month of AA treatment. Univariate and multivariate logistic regression analyses were used to identify predictive factors of initial response to AA treatment. Univariable and multivariable Cox regression analyses were performed to determine prognostic factors that were associated with PSA progression-free survival (PSA-PFS), radiographic PFS (rPFS) and overall survival(OS). The Harrell concordance index with variables only or combined PNI data were used to evaluate the prognostic accuracy.

Conclusion

1.Independent of PSA level variation, PNI level elevation during the first month of AA treatment and high baseline PNI level were significantly correlated with initial response to AA treatment.
2. In addition, low pretreatment PNI level is a negative independent prognosticator of survival outcomes in mCRPC treated with AA and also increases the accuracy of established prognostic model.

Result 1

81(72.3%) of 112 patients showed initial response to AA treatment, in which 15 experienced PSA flare during AA treatment. In multivariate logistic regression analyses, high baseline PNI level, PSA level decrease during the first month of AA treatment and PNI level elevation during the first month of AA treatment were significantly correlated with initial response to AA treatment.

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