Results: Totally, 180/644 (28.0%) patients harboured IDC-P. IDC-P/C21 10% (CFS: HR: 2.27, p < 0.001; OS: HR: 2.63, p < 0.001) and IDC-P pattern-2 (CFS: HR: 1.98, p < 0.001; OS: HR: 2.11, p = 0.003) were independently associated with worse prognosis in the post-PSM cohort. Based on these two risk factors, all men could be classified into five groups with significant differences in survival (Table 1). Patients in Group 0 (Without IDC-P) and IDC-P-Group 1 (IDC-P < 10% AND IDC-P pattern-1) had favorable mCFS (18.0- vs. 17.8-Mo, p = 0.663) and mOS (68.8-Mo vs. Not reached, p = 0.655), while men of IDC-P-Group 4 (IDC-P/C21 10% AND IDC-P pattern-2) harboured the worst outcomes (mCFS: 8.4-Mo; mOS: 29.9-Mo). IDC-P-Group 2 (IDC-P < 10% AND IDC-P pattern-2; mCFS: 14.2-Mo; mOS: 45.9-Mo) and IDC-P-Group 3 (IDC-P/C21 10% AND IDC-P pattern-1; mCFS: 11.9-Mo; mOS: 39.7-Mo) had intermediate prognosis.

Conclusions: IDC-P proportion/C21 10% and pattern-2 were two unfavorable prognosticators for mPCa. Pathological reporting criterion based on IDC-P could further improve the prediction of patient outcome and optimize treatment decision.

Legal entity responsible for the study: Department of Urology, Institute of Urology, West China Hospital, Sichuan University.

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Bone metabolism biomarkers (BMB) in hormone sensitive prostate cancer (HSPC): Results from SWOG S1216, a phase III trial of androgen deprivation therapy (ADT) +/- orteronel

Bone metabolism biomarkers (BMB) are independently prognostic for survival in men with metastatic castration resistant PC. It is unclear whether prognostic or predictive value of BMB applies to an earlier HSPC state. We prospectively assessed BMB in men enrolled in S1216, a phase III trial of ADT +/- orteronel with an ultimate goal to identify HSPC patient (pt) subsets defined by BMB that have differential survival outcomes. Here we report initial results of baseline BMB from S1216 & their relationship to clinical variables.

Methods: Bone resorption [C-telopeptide(CTx), & Pyridinoline (PYD)] & formation markers [C-terminal collagen propeptide (CICP) & bone alkaline phosphatase (BAP)] were measured. Elevated BMB was defined as above median or in upper quartile for each BMB. Men were grouped as having all four, 1-3, or no BMB elevated. Frequency tables of BMB distribution across pt subsets were generated. To
account for multiple comparisons, a p-value of < 0.001 was considered potentially significant.

Results: Of 1,313 men, 799 had baseline BMB. Pt characteristics [median (range) or n (%)]: age 67 (18-92); PSA 29 ng/dL (2.4-671); Gleson > 7: n = 479 (64%); bone mets: 604 (76%); bispheos/denosumab: 4 (5.3%); Zubrod PS 0: 547 (68%); & minimal disease extent: 389 (49%). Median BMB: CTx 0.06 ng/mL (0.03-12.2); PYD 1.68 nmol/L (0.35-17.5); GICP 116 ng/mL (0.25-3360); BAP 1.66 u/L (0-1001). At least one BMB was > median in 87% & in top quartile in 57%. In 604 w/ bone mets, 540 had at least 1 BMB > median while distribution of BMB elevation > median differed significantly w/ in groups defined by PSA (p < 0.0001), Gleason score (p = 0.0001), PS (p < 0.0001) & disease extent (p < 0.0001). For example, in 292 w/ PSA > 29, 30% had all 4 BMB elevated; in those w/ PSA < 29, only 6% had all 4 elevated. BMB distribution in all men did not differ within race/ethnicity, age, & bispheos/denosumab groupings. Trends were similar when BMB upper quartile was used.

Conclusions: In men w/ HSPC initiating ADT, at least one BMB was elevated in 87%. Differences in BMB distribution were seen within pre-defined subsets, w/ BMB elevation tracking w/ higher tumor grade, disease burden & lower PS. Assessment of BMB association w/ patient outcomes is planned.

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