Results: One (3.2%), 6 (19.4%), 9 (29.0%) and 10 (32.3%) were defined as NCCN low-risk (LR), intermediate-risk (IR), high-risk (HR) and very high-risk (VHR), respectively. 5 (16.1%) presented with M1 at diagnosis. The 22-gene GC classified one (3.2%), 7 (22.6%) and 23 (74.2%) as LR (<0.45), IR (0.45-0.6) and HR (>0.6), [22] respectively. All M1 PCa patients harbored high GC scores (range 0.796-0.955). Of the 9 NCCN HR patients, 5 (55.6%) were downgraded to GC-IR, while the VHR patients were not affected. For the 6 NCCN IR patients, 4 (66.7%) in fact harbored high GC scores (0.6336-0.7454). Variance in GC scores was highest in GS 6-7 tumors (GC range: 0.3594-0.7458). Using the six-tier combined NCCN-GC risk grouping ([Spratt et al], 4 (66.7%) and 1 (16.7%) of 6 IR patients were classified as HR and IR, respectively. 4 (44.4%) and 9 HR who were GC-IR, were classified as NCCN-CG HR, but 5 (55.6%) patients who were GC-IR were upgraded to NCCN-CG VHR. Lastly, transcriptome profiling by PAM50 signature revealed a higher proportion of basal than luminal subtypes in our East-Asian cohort (25 (80.6%) vs 6 (19.4%)) and a low proportion of ET5s/ENG5/SNP1+ PCs [4 (12.9%)].

Conclusions: Here, we present our preliminary data suggesting the utility of GC in precise risk stratification of Asian PCa patients. A follow-up study is warranted to investigate the accuracy of the NCCN-GC risk grouping in predicting survival and influencing treatment decision making in Asian men with PCa.

Legal entity responsible for the study: The authors.

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219MO

Real-world utilization pattern of bone-targeted agents for metastatic prostate cancer: Web-based questionnaire study by Hong Kong Society of Uro-Oncology (HKSUO)

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Background: Sufficient evidence and international guidelines support the use of Bone-Targeted Agents (BTA) in metastatic prostate cancer (mPC) in alleviating the risk of skeletal-related events (SREs) as a consequence of bone metastasis. However, BTA utilization pattern in Asian mPC patients remains undetermined. A survey was conducted to evaluate the current practice of BTA in Hong Kong.

Methods: This survey consisted of 20 questions with multiple choice answers, covering patient characteristics, practice preference and factors in decision making. The survey was distributed to evaluate the current practice of BTA in Hong Kong.

Funding: This study was posted online and sent to HKSUO members, including oncologists and urologists in public and private sectors in Hong Kong. The survey was started since Jan 2020 and filled anonymously with password provided by HKSUO.

Results: 30 clinicians (oncologists, 77%; urologists, 23%) completed the survey, with >50% practicing in public hospitals. Majority of the mPC patients had bone metastasis, with only 23% respondents reported <25% of their patients with bone metastasis. Diagnostic imaging for bone metastasis was considered for newly diagnosed prostate cancer when PSA level was high (57%), or patients presented with bone pain (34%). 74% of the respondents considered ≥1 week of waiting time for the imaging was optimal, however, only 40% of their patients has done so. BTA was considered as one of the treatment components (77%), with the primary goal for SRE prevention (73%). Clinicians tend to reserve BTA in patients with higher burden of bone metastasis (6-10 bone metastasis,27%; >10 bone metastasis, 40%). Efficacy (44%) and cost (33%) were the major considerations in selecting BTA. Denosumab was the preferred BTA (63%), while the average duration of treatment was ~1 year (70%).

Conclusions: Our interim analysis shows BTA may be underutilized for Asian mPC patients in real-life setting. Approximately 1/4 of the respondents did not consider BTA in their treatment plan, albeit understanding its primary goal in SRE prevention. The misconception regarding the benefit of BTA limited in higher burden of disease may be the potential barrier. There seems to be an unmet need in the awareness of optimal use of BTA in mPC.

Legal entity responsible for the study: The authors.

Funding: Hong Kong Society of Uro-Oncology.

Disclosure: All authors have declared no conflicts of interest.

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220P

A cost-effectiveness analysis of systemic therapy for metastatic hormone-sensitive prostate cancer

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Background: The treatment paradigm of metastatic hormone-sensitive prostate cancer (mHSPC) has significantly changed over the past decade. Currently, approved first-line treatment options include (1) androgen deprivation therapy (ADT) alone, ADT plus one of the following: (2) docetaxel, (3) abiraterone, (4) enzalutamide, and (5) apalutamide. The high cost of novel androgen receptor pathway inhibitors warrants an understanding of the combinations’ value by considering both efficacy and cost. The objective of this study was to compare the cost-effectiveness of these treatment options in mHSPC from the US payer perspective to guide treatment sequence.

Methods: A Markov model was developed to compare the lifetime cost and effectiveness of ADT alone, docetaxel plus ADT, abiraterone plus ADT, enzalutamide plus ADT, and apalutamide plus ADT in the first-line treatment of mHSPC using outcomes data from published literature. Health outcomes were measured in life-years and quality-adjusted life-years (QALYs). Drug costs were obtained from the Veterans Affairs Pharmacetical Catalog in 2020 US dollars. We extrapolated survival beyond closure of the trials. Model robustness was addressed in univariable and probabilistic analyses. A willingness-to-pay (WTP) threshold of US$100,000 per QALY was used.

Results: Compared to ADT alone, docetaxel plus ADT provided a 0.31 QALY gain at an ICER of US$1,542 per QALY. Abiraterone plus ADT provided an additional 1.29 QALYs against docetaxel plus ADT, with an ICER of US$26,416 per QALY. Compared to abiraterone plus ADT, enzalutamide plus ADT provided an additional 0.06 QALYs at an ICER of US$3,826,216 per QALY. Given the WTP threshold of US$100,000 per QALY, abiraterone plus ADT represented high-value health care.

Table: 220P Base case results

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Total Cost (US$)</th>
<th>QALYs</th>
<th>Life-years</th>
<th>Incremental Cost (US$/QALY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADT only</td>
<td>97,767</td>
<td>3.56</td>
<td>4.70</td>
<td>—</td>
</tr>
<tr>
<td>DCX + ADT</td>
<td>98,237</td>
<td>3.56</td>
<td>5.08</td>
<td>470</td>
</tr>
<tr>
<td>AA + ADT</td>
<td>132,403</td>
<td>5.16</td>
<td>6.45</td>
<td>34,165</td>
</tr>
<tr>
<td>APA + ADT</td>
<td>366,476</td>
<td>5.22</td>
<td>6.51</td>
<td>234,073</td>
</tr>
</tbody>
</table>

QALY=quality-adjusted life-year; ICER=incremental cost-effectiveness ratio; DCX=docetaxel; ADT=androgen deprivation therapy; AA=abiraterone; APA=apalutamide; ENZ=enzalutamide.

Conclusions: Abiraterone plus ADT is the preferred treatment option for men with mHSPC at a WTP threshold of US$100,000 per QALY.

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