133P The global forecast of prostate cancer drug-treatable populations eligible for targeted anticancer therapies (2017-2027)

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Background: Targeted anticancer therapies have been approved by the Food and Drug Administration for use in some men with metastatic castrate-resistant prostate cancer (MCRPC). This study aimed to forecast the first-line MCRPC drug-treatable populations (DTP) by global geographic/economic regions over the period 2017-2027.

Methods: Using country-specific cancer registries, prostate cancer incidence was estimated for 45 countries, representing approximately 90% of world population in 2017. Observed correlations between gross domestic product (GDP), prostate cancer risk, and background survival were used to forecast incidence for lower-income countries under study over the next ten years. Diagnosed incident cases were stratified by Tumor Node Metastasis (TNM) stage and risk categories using National Comprehensive Cancer Network (NCCN) 2013 Guidelines. A GDP-based forecast was applied to TNM stage/NCCN risk at diagnosis based on expected improvements in prostate cancer screening for lower-income countries. Metastatic recurrence-free survival was forecast using a function of historical trends to account for improvements in cancer therapy. First-line MCRPC DTP represents the total number of cases eligible for drug treatment in the first-line MCRPC setting each year. Using estimates of stage- and risk-stratified incident cases, and recurrent cases as described above, annualized estimates of first-line MCRPC DTP were obtained. To estimate incident cases and DTP globally, aggregate estimates for each region were divided by the proportion of countries in that region for which direct estimates were made using the methods described above.

Results: In 2017, there were an estimated 331,000 first-line MCRPC DTP worldwide. The first-line MCRPC DTP worldwide will increase by 30% over the period 2017-2027, with higher growth across lower-income countries (40%), than across high-income countries (14%).

Conclusions: The first-line MCRPC DTP is expected to increase globally, primarily driven by increases in diagnosed incidence in conjunction with growing and aging populations in the lower-income regions.

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