SUPPLEMENTARY MATERIAL

Parameterisation of the hazard function

The survival probability at any given time represents the conditional probability of surviving beyond that specific time point. The survivor function is a non-negative random variable distribution; it is described to estimate the baseline probability of an outcome in the null model:

$$S(t) = e^{-\int_0^t h(t)}$$

The survivor function S(t) is computed as the exponent of the negative definite integral of the hazard function h(t) from time 0 to time t.

An alternative description of the distribution is given by the hazard function, which provides the instantaneous rate of occurrence of the event of interest. The hazard function is defined as follows:

$$h(t) = -\frac{d}{dt}\log S(t)$$

The hazard function h(t) is calculated by taking the negative derivative of the survivor function S(t). The hazard function represents the risk or hazard of AUR/S at any time after the start of treatment.

For analytic simplification, because the data is right censored, the cumulative hazard is used to show the cumulated probability to observe an event at any given time. The cumulative hazard (Eq. 6) is interpreted as the sum of the risk from time 0 to t. It is calculated as follows:

$$H(t) = \int_0^t h(t)$$

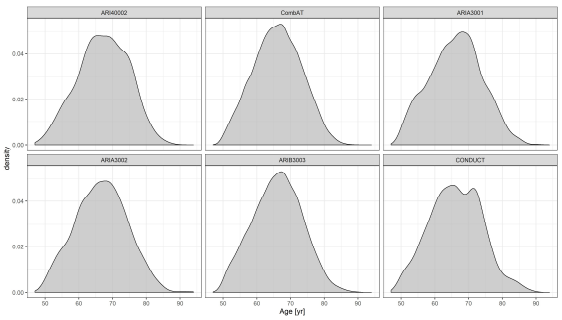
The cumulative hazard function H(t) is calculated by finding the definite integral from time 0 to time t of the hazard function h(t).

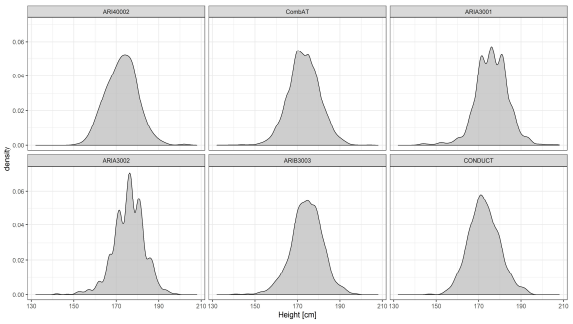
The probability of an event occurring at any given time corresponds to the conditional probability of having an AUR/S at that time. The cumulative incidence is the sum of these conditional probabilities over time:

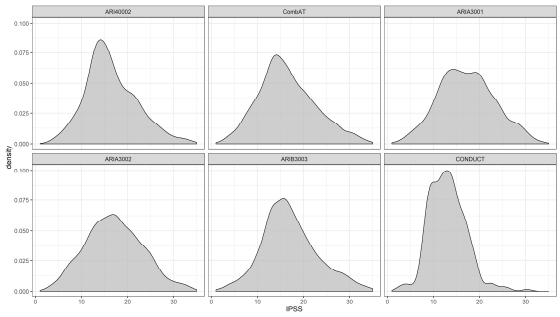
$$CI(t) = 1 - S(t)$$

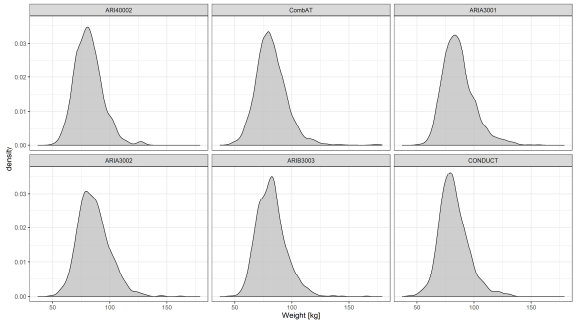
The cumulative incidence is computed from the survivor function S(t). The cumulative incidence can be used to assess the probability of occurrence of any event. It can be computed without technical difficulties and describes the frequency of AUR/S over time.

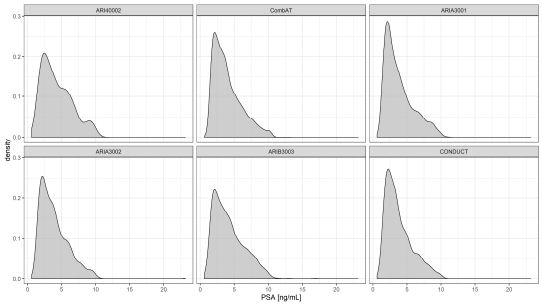
Figure S1 **Baseline clinical and demographic characteristics (age, height, IPSS, weight, PSA, Qmax, PV), stratified by study.**

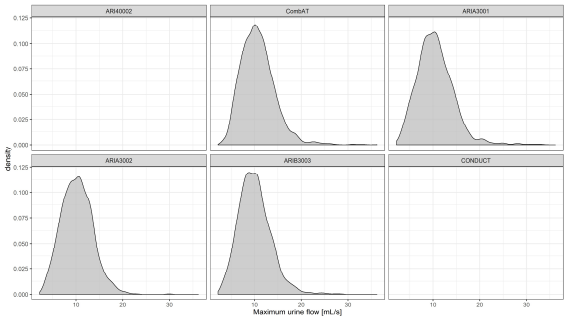


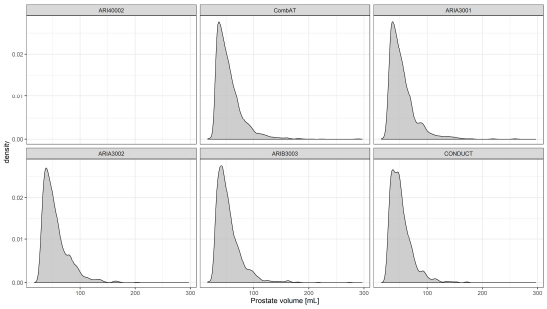






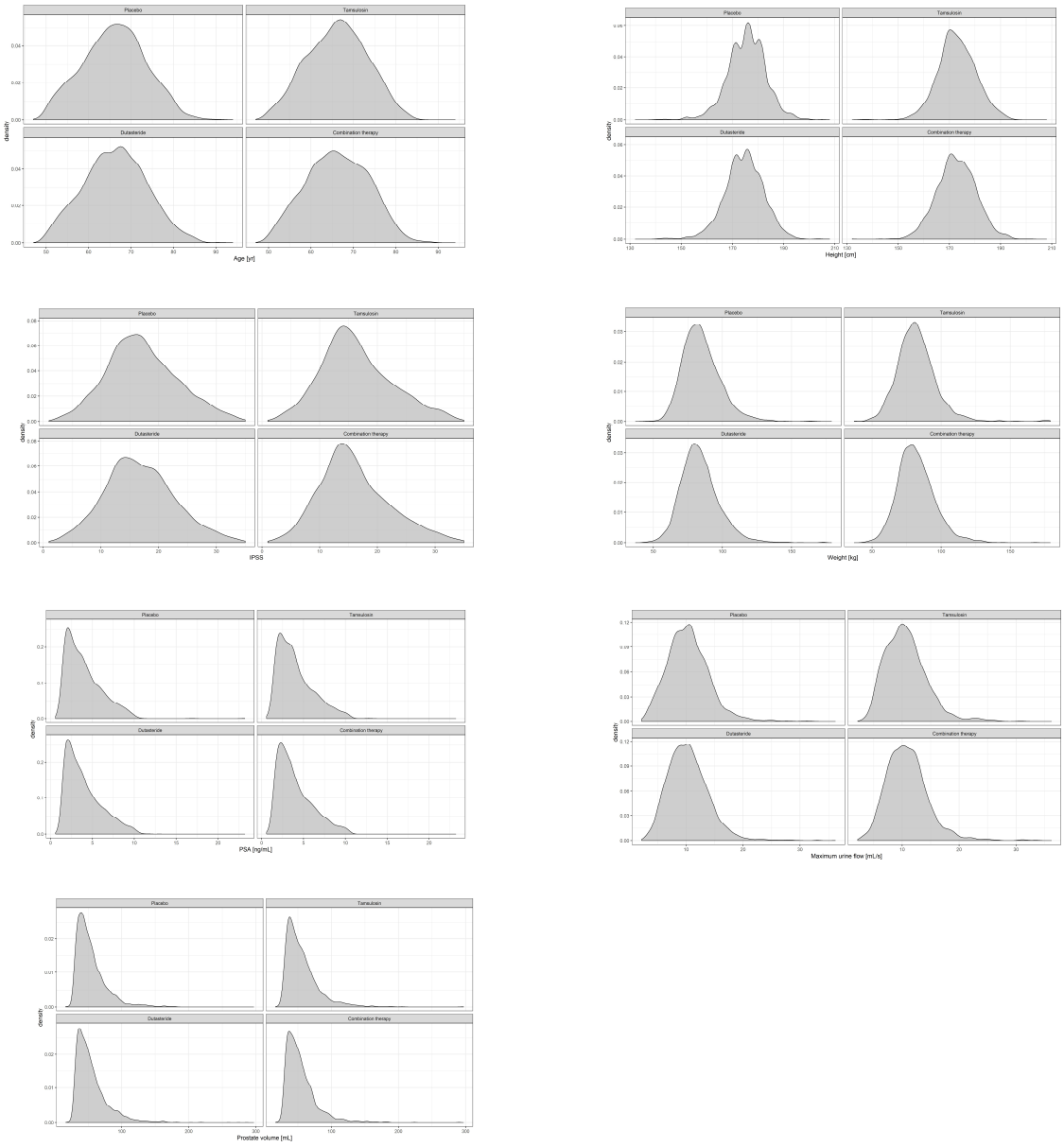






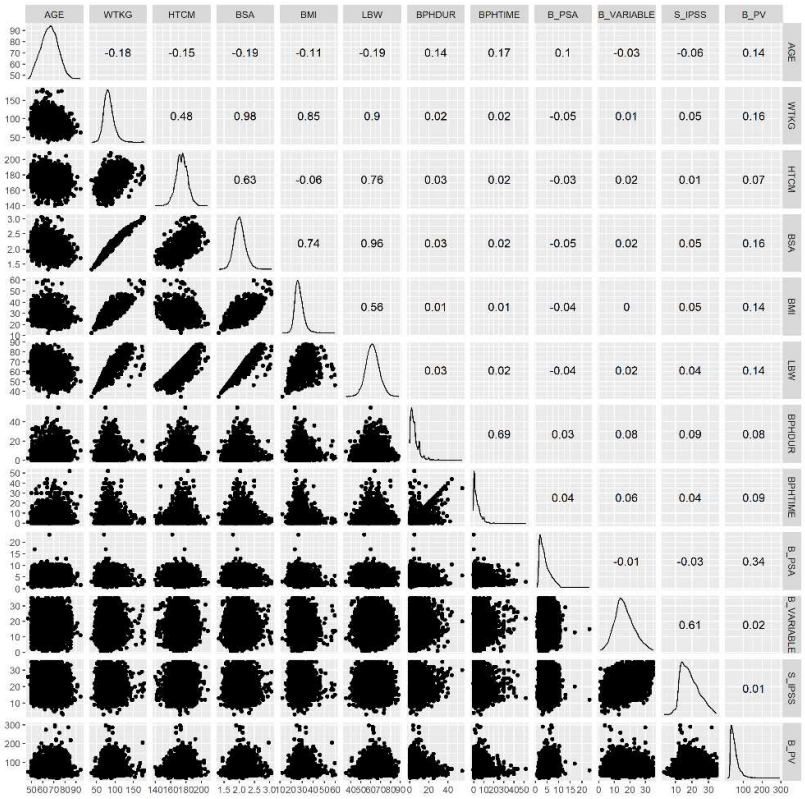
With exception of the wide distribution of symptom severity, as assessed by IPSS (i.e., moderate or severe), selected studies had comparable inclusion/exclusion criteria.

Figure S2 **Baseline clinical and demographic characteristics (age, height, IPSS, weight, PSA, Qmax, PV), stratified by treatment.**



With exception of the wide distribution of symptom severity, as assessed by IPSS (i.e., moderate or severe), selected studies had comparable inclusion/exclusion criteria.

Figure S3 Correlation matrix between baseline demographic and clinical characteristics.



AGE: age (years), WTKG: body weight (kg), HTCM: height (cm), BSA: body surface area, BMI: body mass index, LBW: lean body weight, BPHDUR: duration PBH symptoms (years), BPHTIME: time since BPH diagnosis (years), B_PSA: PSA concentration at baseline (ng/ml), B_VAR: IPSS at baseline and S_VAR: IPSS at screening, B_PV: prostate volume at baseline. Diagonal items show the underlying data distribution. Figures in the off-diagonal elements indicate the degree of correlation or lack thereof.