Stage One Randomization Imbalance Simulations

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Minimization Metrics

Let $n_{A_{ij}}$ denote the number of patients that are on treatment A for the j-th level of prognostic factor i. Let $n_{A_{ijs}}$ denote the number of patients that are on treatment A for the j-th level of prognostic factor i at site s.

$$n_A = \sum_{j=1}^{k_i} n_{A_{ij}}$$

Let $\mathcal{T}$ denote the set of treatments

- Study-wide treatment imbalance:

$$\max_{a,\, b \neq a \in \mathcal{T}} |n_a - n_b|$$

- Study-wide prognostic factor:

$$\max_{a,\, b \in \mathcal{T}} |n_{a_{ij}} - n_{b_{ij}}|$$

- Within-site overall treatment imbalance:

$$\max_{s} \max_{a,b \in \mathcal{T}} |n_{a_s} - n_{b_s}|$$

- Within-site prognostic factor imbalance:

$$\max_{s} \max_{a,\, b \in \mathcal{T}} |n_{a_{ijs}} - n_{b_{ijs}}|$$

Accounting for contraindications