Evaluation of single-arm studies of oncothermia

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Objective

Oncothermia survival studies are problematic due to the missing control arm. This is a problem when, for instance, targeted agents are used, which decreases the treatment's effect. There is a need for a new parameter to evaluate the treatment's effect.

Method

The basic of the idea of the data-separation is the appropriate parameterization of the non-parametric Kaplan-Meier survival pattern by poly-Weibull fit. However we have some qualitative assumptions:

- The data must be well defined and the Kaplan-Meier is the appropriate non-parametric survival model.
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Let us study an actual example of the pancreas trial (n=99), [12].

Results

The Kaplan-Meier survival curve of the historical control and its fit by two Weibull functions. Parameter: $n=1.38$, $t_{0.75}=0.10$.

Conclusion

Some other studies showed good, significant correspondence with the parametric separation.

References