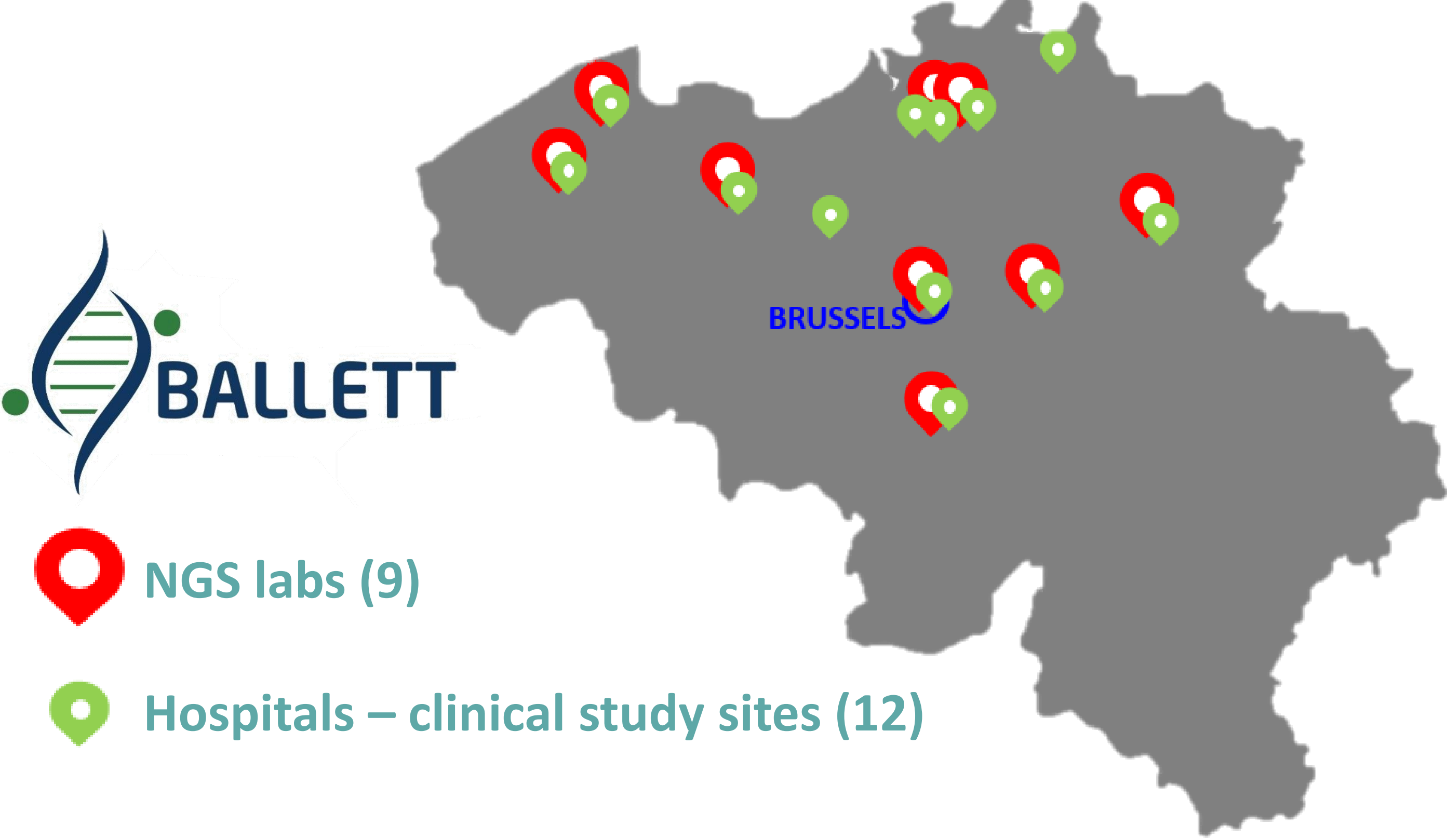


Early cost-consequence analysis of comprehensive genomic profiling in advanced tumor-agnostic cancer patients

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Participating laboratories in the clinical BALLETT study



Background

Comprehensive genomic profiling (CGP) can identify targets beyond on-label targets. The single arm Belgian Approach of Local Laboratory Extensive Tumor Testing (BALLETT) study prospectively provided CGP, followed by a weekly molecular tumor board (MTB) to 814 advanced solid cancer patients. The number of variants, MTB recommendations and MTB-matched treatments were recorded. However, the economic impact of CGP is unclear.

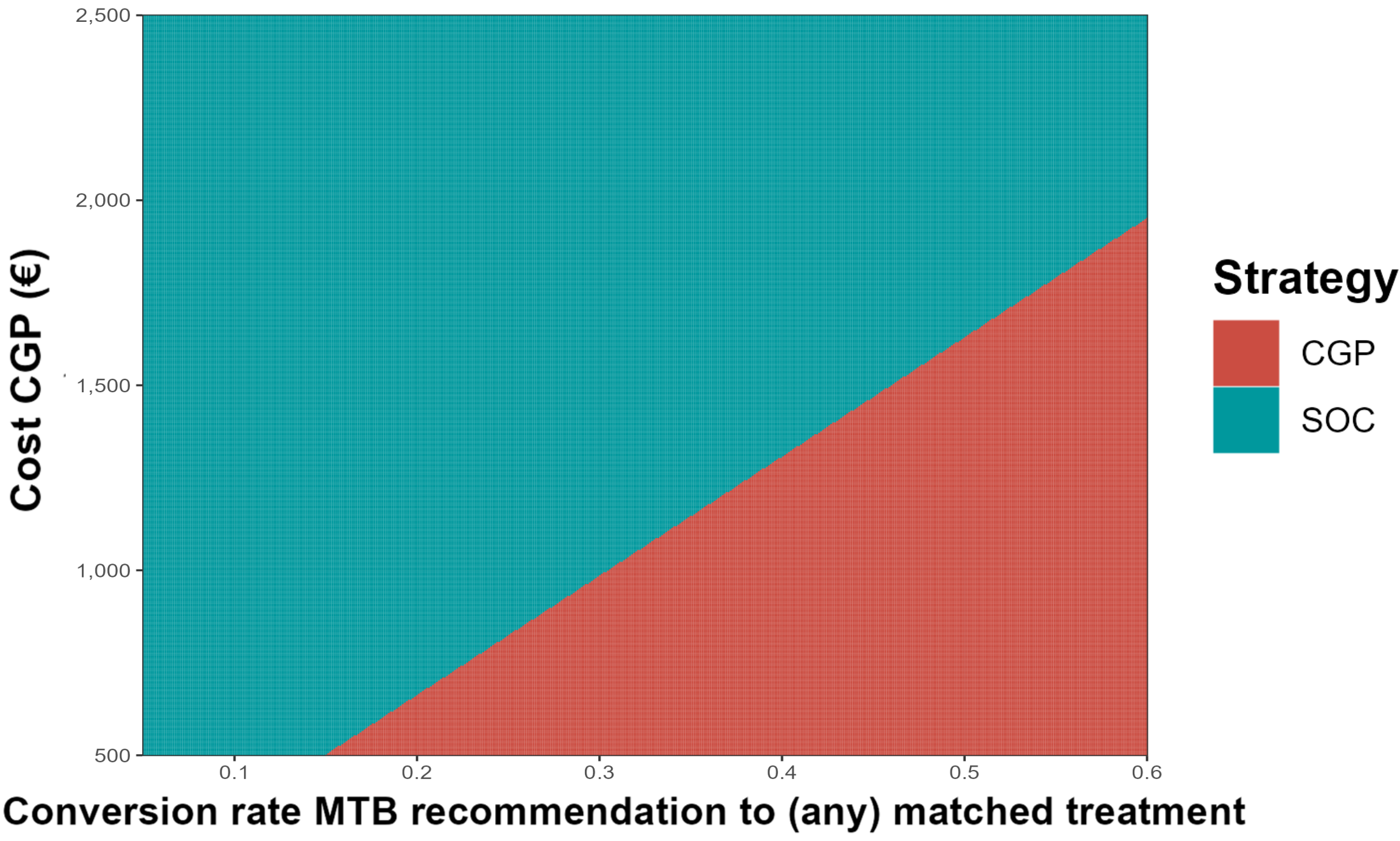
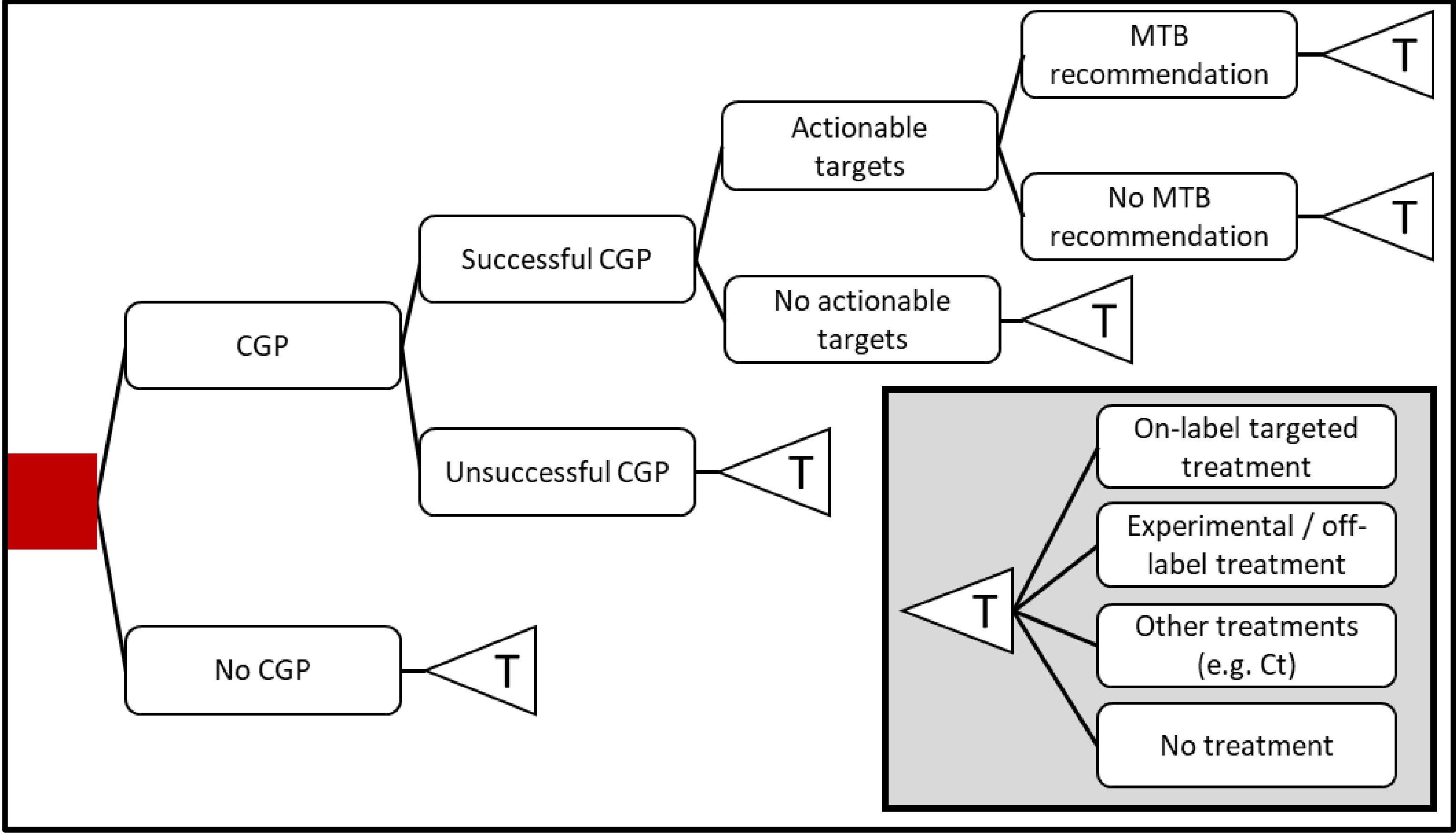
Aim

“To provide more insights into the added benefits and associated costs of CGP, conducting a cost-consequence analysis alongside a Belgian single arm, nation-wide clinical study in a metastasized tumor-agnostic population”

Methods

- P:** Tumor agnostic patients, of which the majority exhausted standard of care
- I:** CGP (TruSight Oncology 500) on DNA&RNA, followed by MTB
- C:** No CGP (exhausted SOC)
- O:** Diagnostic cost, actionable targets, MTB recommendations, CGP-matched treatments and incremental cost/outcome ratios

- ### Model characteristics
- Decision tree informed by data from BALLETT study
 - Micro-costing informing CGP costs
 - Diagnostic time horizon, excluding treatment effects
 - Two-way sensitivity analysis at a €5,000 willingness to pay to match a treatment



Two-way sensitivity analysis varying cost of CGP and uptake of MTB recommendations at a €5.000 willingness to pay to match a treatment.

Results

	Mean diagnostic cost	Probability of patients in the cohort to have an:		
		Actionable target	MTB recommendation	CGP-matched treatment
CGP	€2.030	0.76 (€2.680)*	0.64 (€3.150)*	0.11 (€18.139)*
No CGP	€0	0	0	0

Results of base case analysis. * Incremental cost / incremental outcome ratios are presented between brackets.

Conclusions

- CGP leads to increased costs and additional treatment options, mostly investigational ones, for advanced cancer patients.
- Sensitivity analyses showed that the findings are highly sensitive to the uptake of MTB recommendations for matched treatments.
- While research is ongoing to determine the incremental survival benefit of matching investigational treatments, decision-makers should consider the willingness to pay for such treatments.

Take home message

CGP would have a beneficial cost-consequence balance at a willingness to pay of €5.000 for a CGP-matched treatment when costs decrease to €1.500 and the uptake of MTB recommendations increases to 0.4.

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