Time Implications of an Oncology Intelligence Platform vs Standard Practice: A UK Single Centre Breast Cancer MDT Meeting Simulation Trial

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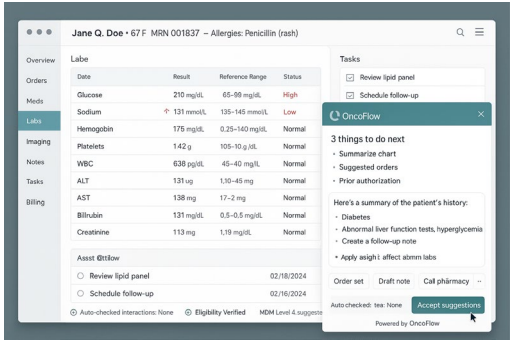
Background

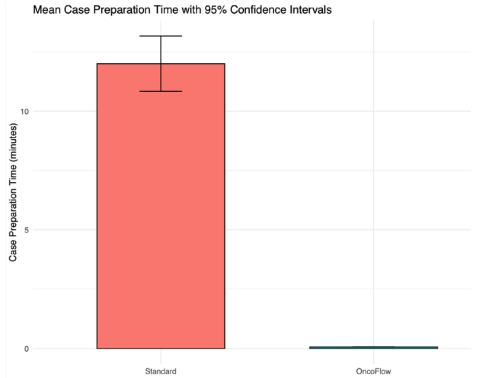
Multidisciplinary team meetings (MDTMs) are central to NHS cancer care. NHS England conducts over 55,000 MDTMs annually, consuming ~1.2 million hours of clinician time. At the Isle of Wight (IOW), weekly breast cancer MDTMs typically review 30-40 cases over Microsoft Teams, occupying ~2 hours of clinicians' time. For the same case volumes, case preparation requires an estimated 50-80 hours per week across three key roles: surgeon, radiologist, and pathologist. The OncoFlow platform uses artificial intelligence (AI), primarily large language models (LLMs) to perform data extraction and treatment matching to assist cancer MDTMs. A simulation trial was performed with the objective of evaluating time savings benefit of this platform against standard practice in MDTM case preparation.

Method

Two prospective, synchronous, simulation (non-EHR/Electronic Health Record integrated) breast cancer MDTMs were conducted via MS Teams. The MDT consisted of one MDT Coordinator, one Surgeon, one Medical Oncologist and Radiation Oncologist equivalent from the IOW. The first MDTM used standard manual practice whereas the second MDTM used the intervention i.e. OncoFlow Intelligent Platform. Ten cases were discussed in each meeting with five each of early post-operative and metastatic. Five cases were "simple", three were "edge", two were "complex".

Results





OncoFlow achieved 100% accuracy in LLM-assisted data extraction and parameter validation.
OncoFlow reduces case preparation time by 12 minutes, (p=0.000000002535).
Annually, net MDTM duration reduction: 10-14 hours.

Conclusion

190-fold reduction in case preparation time

40% reduction in discussion time for simple cases

20% time surplus enabling more thorough review of complex cases

These improvements support NHS England's 2020 guidance on MDTM streamlining. A larger, multicentre simulation study is now underway to evaluate broader implementation, with plans for integration into real-world clinical workflows via EHR systems.

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