

**Table S2: Examples of AI in the clinical stages of drug development**

<b>AI Technology utilised</b>	<b>Function and subfield of AI on which technology is based</b>	<b>Reference</b>
<i>Tufts CSDD algorithm</i>	The algorithm assigns a probability score for regulatory approval of oncology drugs following phase 2 clinical trial testing	<sup>1</sup>
<i>IBM Watson for Oncology</i>	The system can analyse data from clinical notes, articles, scientific reports, and guidelines from the National Comprehensive Cancer Network	<sup>2</sup>
<i>AiCure</i>	Monitors patient behaviour and enables remote patient engagement in clinical trials. Also capable of flagging participants with inappropriate dosing parameters, as well as allows trial operators to select the most compliant patients to support trial results	<sup>3</sup>
<i>AdaBoost</i>	Random forest-based system that illustrates the predictive power of bioactivity, alongside features that represent the drug's chemical and pharmacological properties	<sup>4</sup>

*The AI technologies described in this table were obtained through the narrative review. They represent evidence of AI that has been successfully applied in industry or as proof of concept for the application of AI to a specific problem relating to drug development in the clinical stages*

1. DiMasi J, Hermann J, Twyman K, Kondru R, Stergiopoulos S, Getz K, et al. A Tool for Predicting Regulatory Approval After Phase II Testing of New Oncology Compounds. *Clin Pharmacol Ther.* 2015;98:506–13.
2. Fountzilias E, Tsimberidou AM. Overview of precision oncology trials: challenges and opportunities. *Expert Review of Clinical Pharmacology.* 2018;11:797–804.
3. Van Biesen W, Decruyenaere J, Sideri K, Cockbain J, Sterckx S. Remote digital monitoring of medication intake: methodological, medical, ethical and legal reflections. *Acta Clinica Belgica.* 2021;76:209–16.

- 
4. Murali V, Muralidhar YP, Königs C, Nair M, Madhu S, Nedungadi P, et al. Predicting clinical trial outcomes using drug bioactivities through graph database integration and machine learning. *Chem Biol Drug Des.* 2022;100:169–84.