Big data and interpretable models for outcome prediction in radiation oncology

Propositions belonging to this dissertation

Big Data and Interpretable Models for Outcome Prediction in Radiation Oncology

Biche Osong

1	*I confess that I have been blind as a mole, but it is better to learn wisdom late than never to learn it at all.* **Conan Doyle, 1892**
2	*(Big) Data is the new oil. It is valuable, but if unrefined, cannot be used. It has to be changed into gas, plastic, chemicals, etc., to create a valuable entity that drives profitable activity, so must data be broken down, and analyzed for it to have value.* **Clive Humby, 2006**
3	*Radiation oncology is within the realm of Big Data but needs a great deal of collaboration between institutions to bring it to maturity.* **Biche Osong, 2023**
4	*Remember that all models are wrong, but some are useful; the practical question is how wrong they have to be not to be useful.* **George Box, 1987**
5	*Demographic information is informative for developing personalized clinical survival models.* **Biche Osong, 2023**
6	"While the individual man is an insoluble puzzle, he becomes a mathematical certainty in the aggregate. You can, for example, never foretell what any man will do, but you can precisely say what an average number will be up to. Individuals vary, but the percentages remain constant." **Conan Doyle,**
7	The simple graph (visualization) has brought more information to the data analyst's mind than any other device. **John Tukey**
8	*Algorithmically generated model complexity is not a guarantee for better performance. Simple interpretable models would perform equally likely in most cases.* **Biche Osong, 2023**
9	*I know not of any successful collaboration without a formal introduction of the parties: caregivers meet machine learning, machine learning, caregivers.* **Biche Osong, 2023**
10	*Every beginning has an end, and with every end, a new beginning.* **Santosh Kalwar,**