PROPOSITIONS FOR THIS THESIS

IMAGING AND RESECTION OF GLIOBLASTOMA

in light of molecular markers

1. Complete tumor resection is associated with better overall survival for patients with newly diagnosed IDH-wildtype glioblastoma. *This thesis*

2. The question is not *if* complete glioblastoma resection should be achieved, but *how.* *This thesis*

3. Intraoperative ultrasound guided surgery enables complete tumor resection more often than standard surgery without harming patients and is therefore recommended to achieve complete safe glioblastoma resection. *This thesis*

4. Supratotal resection of glioblastoma shows a potential survival benefit for patients, but its safety needs further investigation. *This thesis*

5. AI algorithms are useful to predict molecular markers of glioma based on MRI scans and they can potentially improve the way we diagnose and treat brain tumors. *This thesis*

6. Every biopsy is a failed imaging experiment. *Mark Griswold*

7. New imaging technologies combined with artificial intelligence will shape the future of neurosurgery.

8. All our knowledge begins with the senses, proceeds then to the understanding, and ends with reason. There is nothing higher than reason. *Immanuel Kant*

9. In so far as a scientific statement speaks about reality, it must be falsifiable; and in so far as it is not falsifiable, it does not speak about reality. *Karl Popper*

10. All significant breakthroughs are break -"withs" old ways of thinking. *Thomas Kuhn*

11. God did not create any disease without a treatment. *Prophet Mohammed, PBUH*

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