

## *Propositions*

### **Hepatocellular Carcinoma: from Liquid Biopsy to Immunotherapy**

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1. Circulating tumor cells (CTCs) are extremely challenging to be isolated thus not suitable for tumor mutational analysis. (*This thesis*)
2. Circulating tumor DNA may serve as a liquid biopsy to identify druggable mutations in advanced HCC patients. (*This thesis*)
3. For patients with HCC, co-blockade of TIGIT and PD-1 may convert PD-1 non-responders to responders. (*This thesis*)
4. Cancer testis antigens can be expressed in tumor-free liver and might be indicative for post-resection HCC-recurrence and survival. (*This thesis*)
5. TIGIT is an attractive immune checkpoint candidate to be targeted given that it plays a role in many of the steps that generate cancer immunity. Leveraging TIGIT in combination with other modalities such as PD-1/PD-L1 blockade may achieve even more robust clinical outcomes. (*Nicholas A. Manieri, Trends in Immunology, 2017*)
6. Dual checkpoint blockade represents promising avenues for synergistic therapeutic responses because these drug combinations display unique and complementary pharmacodynamics. (*Alex D. Waldman, Nature Reviews Immunology, 2020*)
7. A scientific man/woman ought to have no wishes, no affections, - a mere heart of stone (resistance to pressure and failure). (*Charles Darwin*)
8. To be a successful biological PhD, luck and emotional intelligence (EQ) matter more than intelligence quotient (IQ).
9. For researchers, lack of curiosity killed the cat.
10. Advances in medicine and agriculture have saved vastly more lives than have been lost in all the wars in history. (*Carl Sagan*)
11. 行百里者半九十. The last part of an endeavor is the hardest to finish. (*战国策*)