Propositions

Accompanying the thesis 'Characterization of tumor cells: the gear for personalized medicine'.

- CD146 expression, although uncommon in ER-positive disease, carries important prognostic information in this subgroup of primary breast cancer patients.
 This thesis
- 2. Although the potential of liquid biopsies in the perioperative setting of MIBC is clear, clinical utility requires prospective validation.

 This thesis
- CTCs are a minimally invasive means to provide an up-to-date AR-status in patients with metastatic breast cancer.
 This thesis
- 4. CTC count is a strong, independent prognostic marker for progression-free survival and overall survival in mCRPC patients that are treated with cabazitaxel in de second line. This thesis
- 5. Cisplatin monotherapy yields comparable outcomes as other regimens in unselected groups of heavily pretreated metastatic breast cancer patients, however, besides CTC count other clinically relevant biomarkers to select patients for cisplatin therapy remain to be identified. This thesis
- 6. CfDNA and CTCs can yield complementary rather than competitive information. *C. Keup et al. Cancers (Basel)*, 2019 Feb; 11(2): 238
- 7. Isolation of single CTCs is the method of choice to interrogate tumor heterogeneity in liquid biopsies.
 - L. Keller et al. Nature Reviews Cancer volume 19, pages553–567(2019)
- 8. Promising data and rapidly advancing technologies indicate that liquid biopsies have the potential to personalize the clinical management of cancer patients receiving immune-checkpoint inhibitors.
 - P. Hofman et al. Annals of Oncology Volume 30, issue 9, P1448-1459 (2019)
- Diagnostic leukapheresis might greatly facilitate liquid biopsies as it increases CTC yield in CTC-positive cases while reducing the percentage of cases lacking CTCs.
 T.N. Fehm et al. Cytometry A 2018 Dec;93(12):1213-1219
- 10. Research should not only lead to scientific publications but also benefit society and quality of life.

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11. "The flower that blooms in adversity is the most rare and beautiful of them all". *From the movie: Mulan*