

BeVis study for personalized oncological care

Background and Aim:

- BeVis biobank as a multi-department initiative to assemble bio-specimens and clinical data of patients suffering from gastrointestinal or hepatobiliary malignancies
- By establishing a compendium of cryo probes, functional *in vitro* models alongside cataloging the longitudinal clinical data of each patient, we aim to develop an implement individualized diagnostics that eventually will translate in personalization, thereby optimization of therapeutic treatments
- Organoids derived from tumor and non-tumor specimens based on stem cell culture conditions emerge as an *in vitro* technology with high pathophysiological relevance

Results:

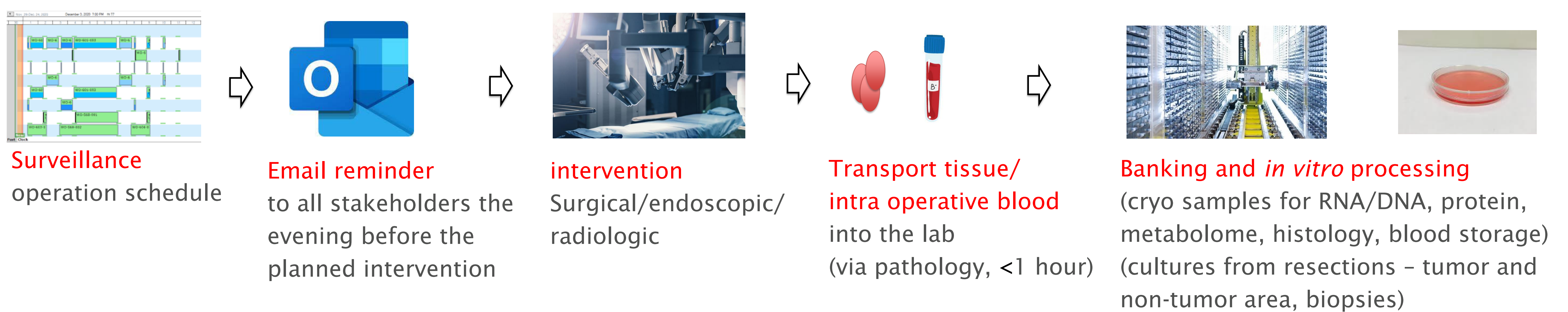


Fig1: Rough outline of the BeVis procedures, all steps are performed under SOP guidelines



Fig2: Example photographs of pancreatic cancer organoid culture development from day 3, to day 24 to day 48 in culture.

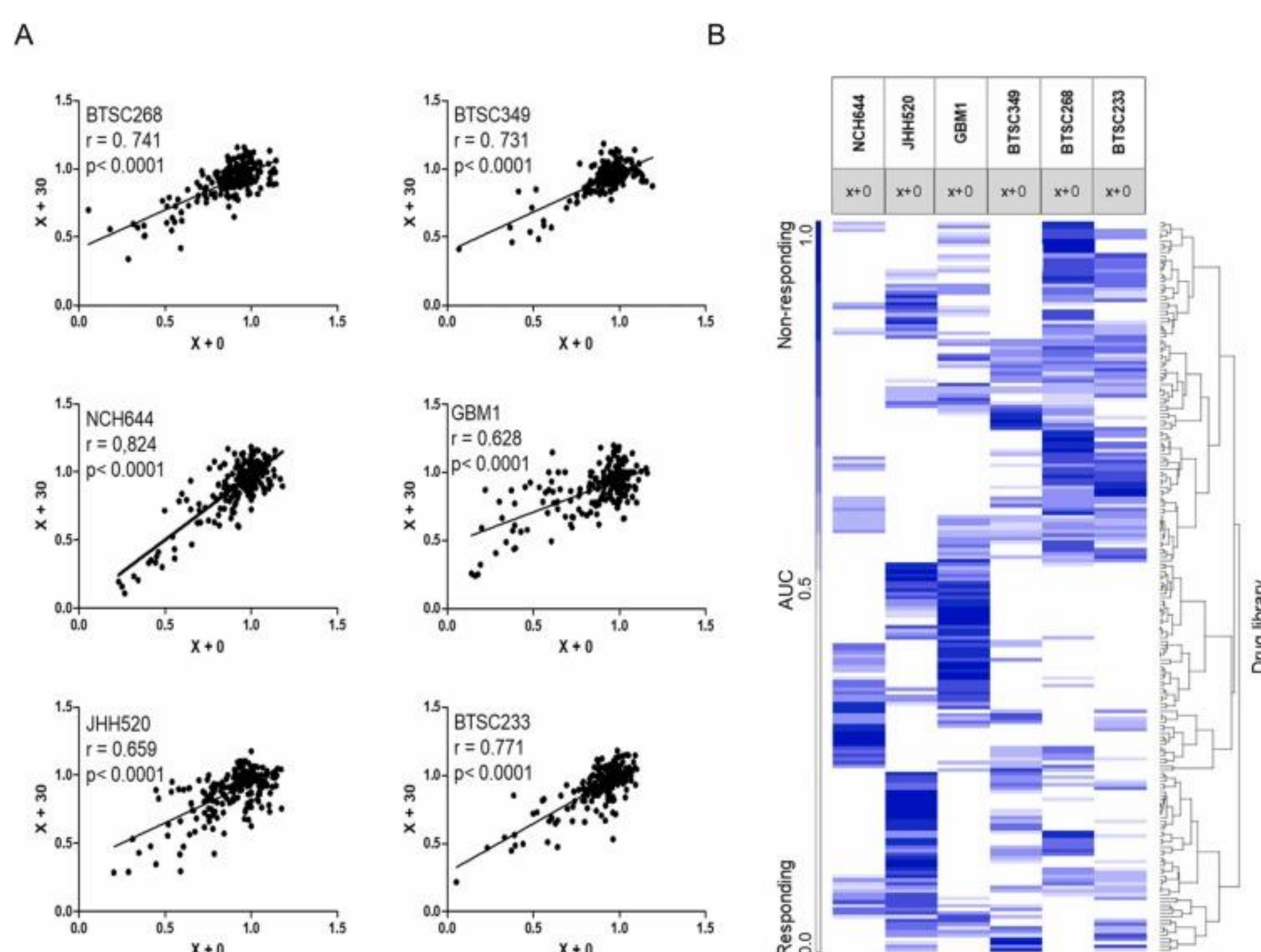


Fig3: Conduction of medium throughput *in vitro* drug screen with clinical compound library similar as done previously with brain organoid-like structures. Hit may lead to optimization of adjuvant treatment plans for tumors that do not respond to standard of care plan. Figure from Nickel *et al.*, 2021.

Co-Clinical Trials

ONKOZERT

IndiTRec - Individualized Treatment of Rectal Cancer
(multicenter: center Magdeburg)
registered trial DRKS00027832

- Stratification of responders/non-responders in neo-adjuvant setting, optimization of adjuvant therapy

PeTreCo - Personalized Treatment of Colon Cancer
and thereof originated liver metastasis
(in preparation)

Clinic of Surgery
Clinic of Gastroenterology
Institute of Pathology
Clinic for Radiology & Nuclear Medicine

References:

- [1] Seidlitz *et al.*, 2021; [2] Hennig *et al.*, 2022