

DPC 2026 - Freiburg

Distangling contaminants from true intratumoural microbial signals in pancreatic ductal adenocarcinoma – A benchmarking approach

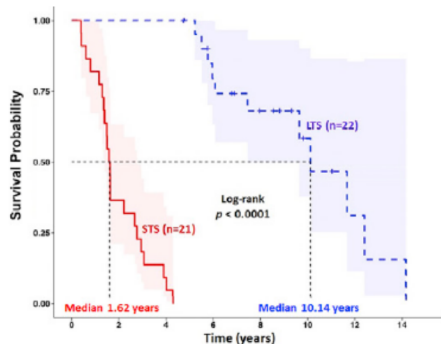
Linh Dang

2026-03-07

Contamination in Microbiome Study

Cell

Tumor Microbiome Diversity and Composition Influence Pancreatic Cancer Outcomes



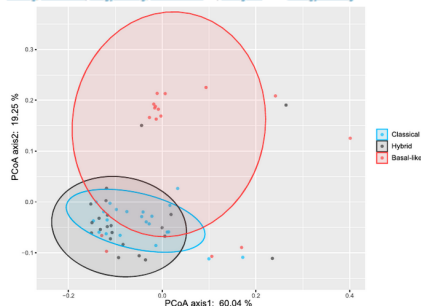
Riquelme et al. Cell 2019

Key taxa: xxx, xxx

Article | [Open access](#) | Published: 31 August 2021

Tumor microbiome contributes to an aggressive phenotype in the basal-like subtype of pancreatic cancer

[Wei Guo](#), [Yuchao Zhang](#), [Shiwei Guo](#), [Zi Mei](#), [Huiping Liao](#), [Hang Dong](#), [Kai Wu](#), [Haocheng Ye](#), [Yuhang Zhang](#), [Yufei Zhu](#), [Jingyu Lang](#), [Landian Hu](#) , [Gang Jin](#)  & [Xiangyin Kong](#) 



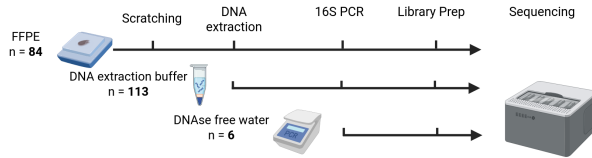
Guo Communication biology 2021

Key taxa: xxx, xxx

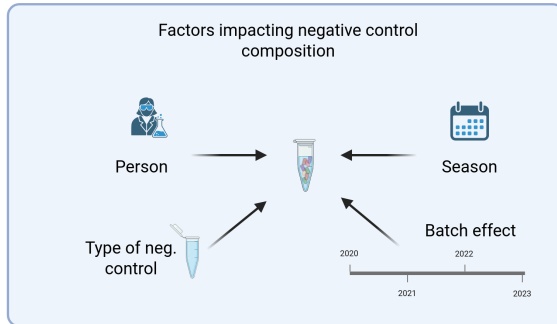
Section 1

Negative Control Survey in the Lab

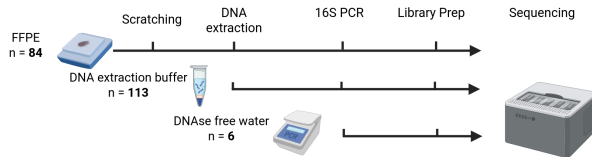
Negative Sample Collection



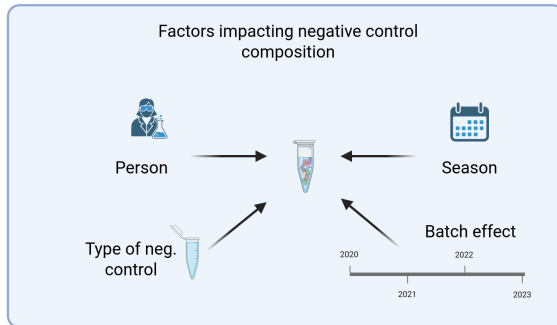
- In total 203 NCT samples over 4 years



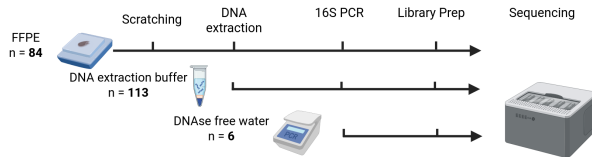
Negative Sample Collection



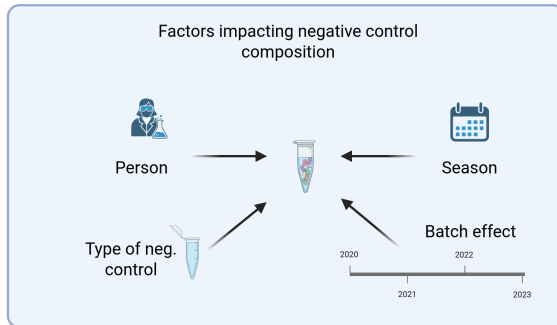
- In total 203 NCT samples over 4 years
- Dominant taxa:



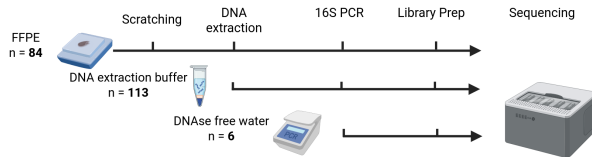
Negative Sample Collection



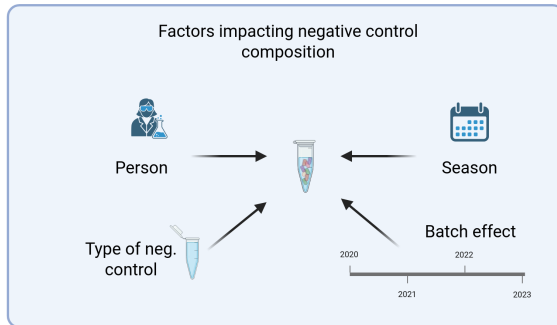
- In total 203 NCT samples over 4 years
- Dominant taxa:
 - xx 60% of samples



Negative Sample Collection



- In total 203 NCT samples over 4 years
- Dominant taxa:
 - xx 60% of samples
 - xx 70% of samples

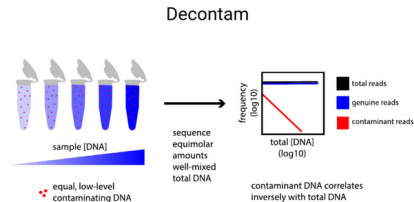
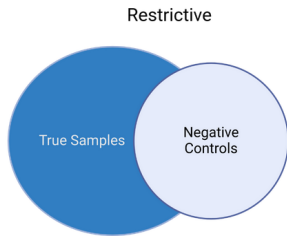


Bacterial Composition

Section 2

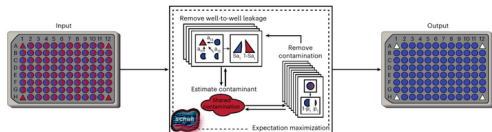
Intratumor Microbiome in PDAC and Assessment of

Decontamination Strategies

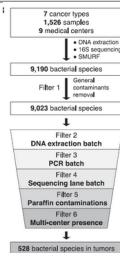


Davis et al. 2018 Microbiome

SCRuB



Austin et al. 2023 Nature Biotechnology



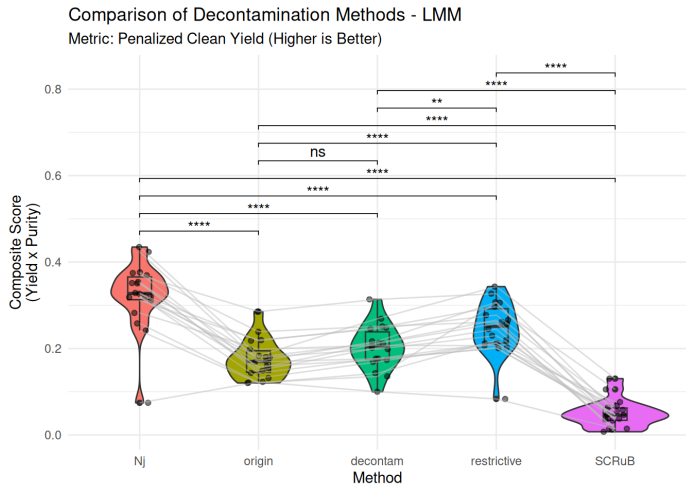
Nejman et al. 2020 Science

Section 3

Results

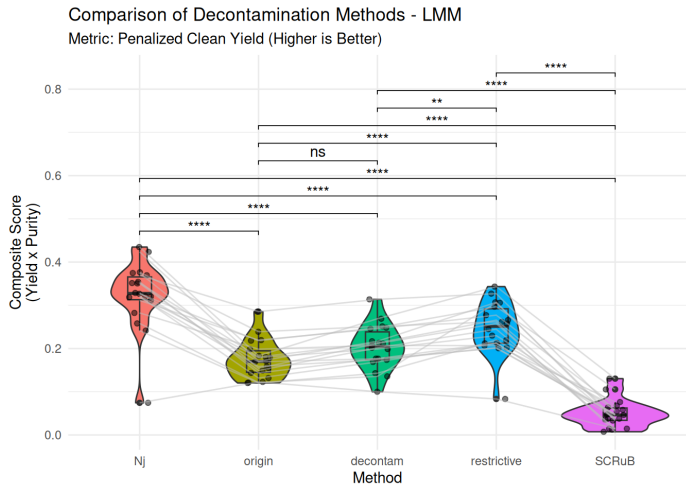
Assessment of Decontamination Approach

- AA



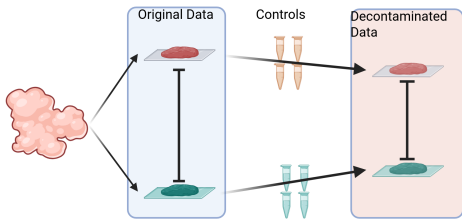
Assessment of Decontamination Approach

- AA
- BB



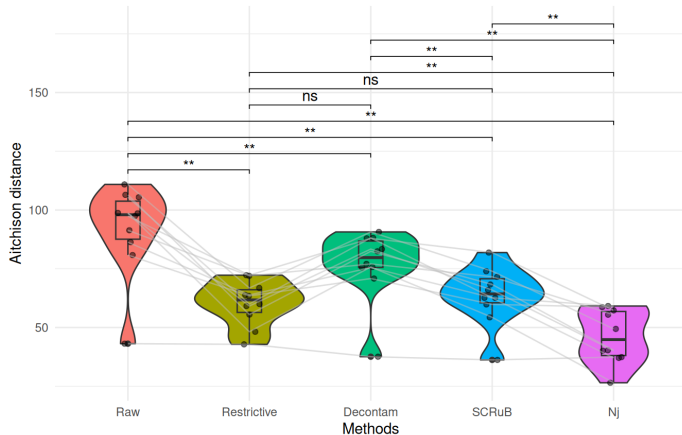
Integrate Replica

Utilize Replica for Assessment



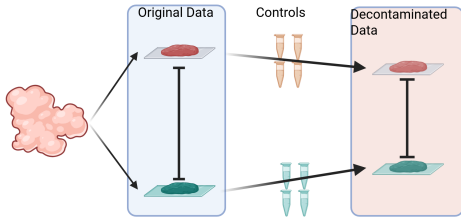
- 10 PDAC sample, each with 2 replica

Paired Wilcoxon test
The lower the better



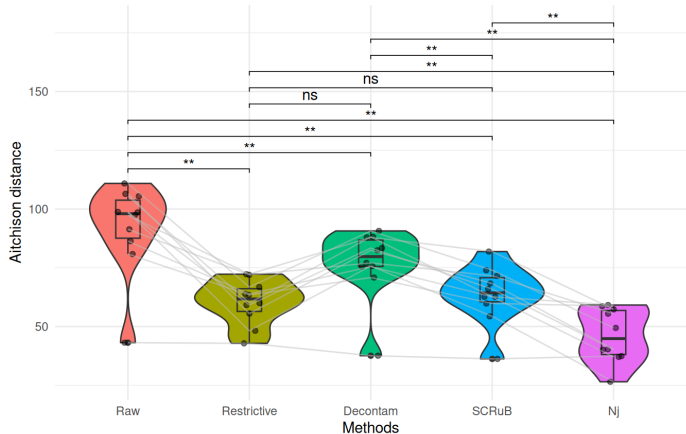
Integrate Replica

Utilize Replica for Assessment

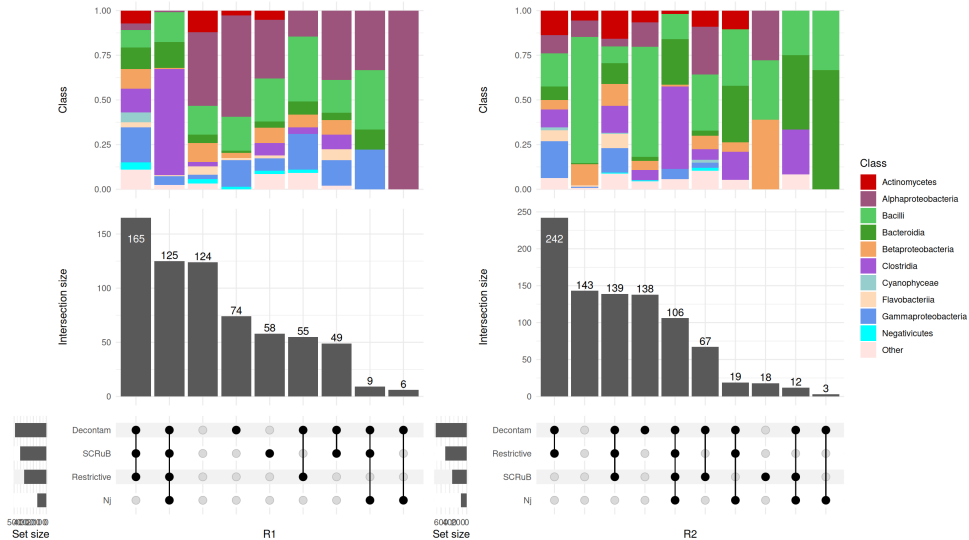


- 10 PDAC sample, each with 2 replica
- Aitchison distance with paired Wilcox test.

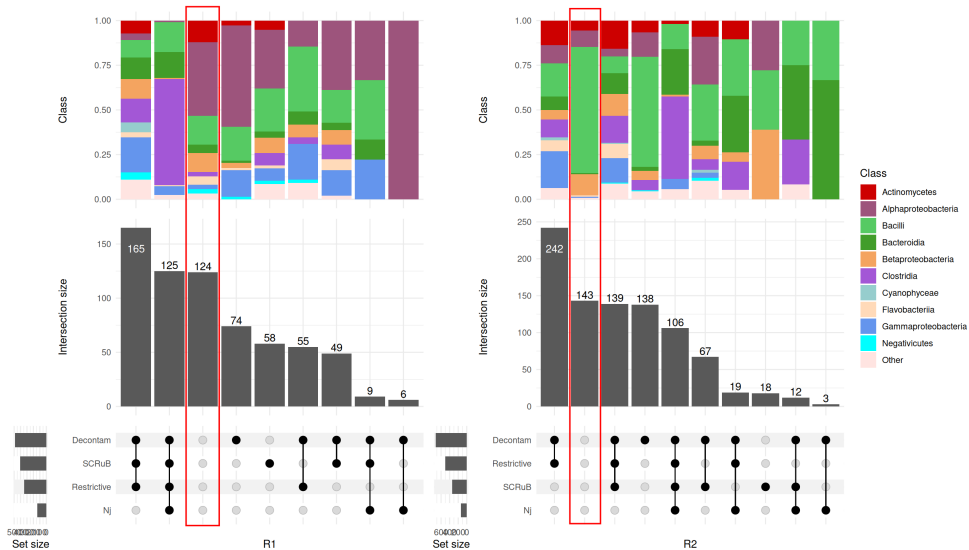
Paired Wilcox test
The lower the better



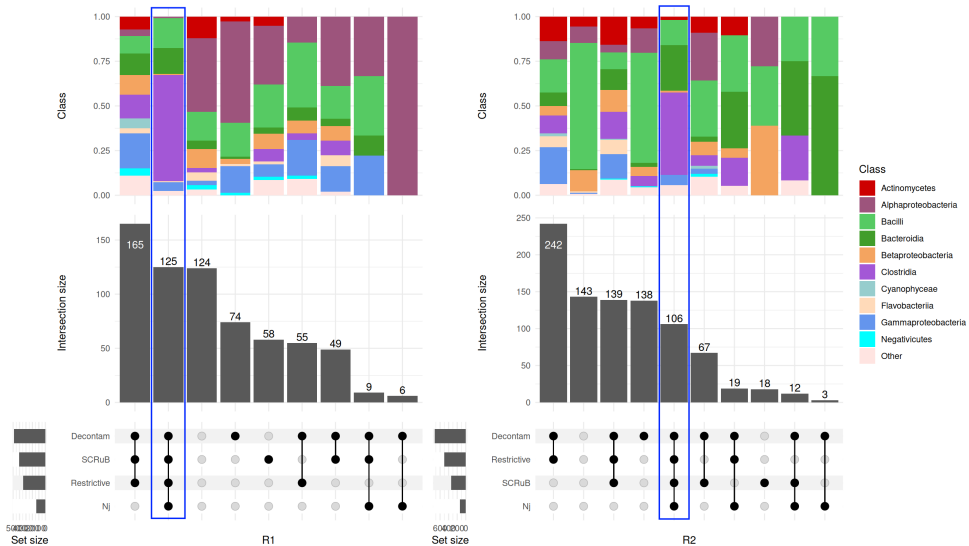
Overlap - Microbiome profile of PDAC in mice



Overlap - Microbiome profile of PDAC in mice



Overlap - Microbiome profile of PDAC in mice



Acknowledgements

UNIVERSITÄTSMEDIZIN
GÖTTINGEN **UMG**

AG Neesse

Christoph Ammer-Herrmenau

Jacob Hamm

Jutta Blumberg

Ulrike Wegener

Sören Buchholz

Catharina Lingsens

Cathleen Heuer

Areej Shahbaz

Richard Meier

Rahel Scholz

Louisa Eskelson

Helena Lescow

Charlotte Vogel

Linh Dang

Isabel Toussaint

Johannes Richter

Annemarie Dresbach

Leoni Florschütz



UMG

AG Beissbarth (Bioinformatik)

AG Ströbel (Pathologie)

AG Schneider (Chirurgie)

AG Papantonis (Pathologie)

AG Sax (Medizinische Informatik)

Externe Kooperationspartner

Johannes Zimmermann, Jena

Gabriel Nussbaum, Jerusalem

Bernd Heinrich, Hannover

Magdalena Huber, Marburg

Matthias Gaida, Mainz

Paco Real, CNIO Madrid

Nuria Malats, CNIO Madrid

Evgenij Shumilov, Münster

Ulrike Bacher, Bern



P-MAPS Consortium

