

BBMRI.at Partner's Pathology & Biobank Sample Collection Profile

FFPE Tissue Blocks & Slides Collection

August 2021

At the Diagnostic & Research Institute for Pathology, Med Uni Graz, tissue samples taken during surgical interventions are examined for making a diagnosis. These tissue samples are prepared according to a standardized protocol, fixed in formalin and embedded in paraffin (FFPE). The resulting FFPE tissue blocks and histology sections from over 1 million patients are stored at room temperature in the archive cabinets of Biobank Graz. In addition to diagnoses and histopathological findings, survival data and sub-cohorts with digitized sections are also available for research in anonymized form.

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| Disease Area | Different kinds of diseases, non-affected tissue |
| Research Area | ICD-10 codes: A04.7; A04.9; A15.2; B07; B08.1; B44.9; B80; C02.9; C06.9; C14.0; C15.9; C16.9; C18.0; C18.7; C18.9; C20; C21.0; C22.0; C22.1; C23; C24.0; C25.4; C25.9; C32.9; C34.9; C43.9; C44.9; C45.0; C50.0; C50.9; C53.9; C55; C56; C57.0; C61; C63; C64; C65; C67.9; C69.3; C73; C77.9; C78.0; C78.6; C78.7; C79.3; C79.5; C79.8; C81.1; C82.7; C82.9; C83.0; C83.3; C83.4; C83.7; C83.8; C84.4; C85.9; C90.0; C91.1; C92.0; C92.1; C96.2; D03.9; D04.9; D05.0; D05.1; D06.9; D07.5; D09.0; D10.1; D10.3; D12.5; D12.6; D12.8; D12.9; D13.4; D13.5; D16.9; D17.9; D18.0; D21.9; D22.9; D23.9; D24; D25.9; D26.9; D27; D30.0; D32.9; D34; D35.0; D35.1; D36.1; D37.1; D37.3; D37.7; D39.1; D40.0; D41.4; D43.2; D46.4; D46.9; D69.3; D73.4; D86.0; E04.0; E04.9; E05.0; E06.3; E06.5; E85.4; H60.4; I12.9; I26.9; I51.4; I51.7; I84.9; I88.1; I88.9; J03.9; J18.0; J18.9; J21.9; J32.9; J33.9; J35.0; J35.1; J35.2; J42; J43.2; J43.9; J47; J60; J67.9; J84.8; J84.9; K06.8; K09.0; K13.2; K20; K21.0; K22.7; K25.9; K26.9; K29.1; K29.4; K29.5; K29.7; K29.8; K31.4; K31.7; K35.9; K37; K38.1; K50.9; K51.9; K52.8; K52.9; K55.0; K55.9; K56.2; K56.4; K57.3; K62.0; K62.1; K62.8; K63.5; K65.0; K65.8; K71.3; K73.9; K74.0; K74.3; K74.6; K75.0; K76.0; K80.0; K80.1; K80.2; K81.0; K81.1; K81.9; K82.4; K85.9; K86.1; L03.9; L05.9; L57.0; L72.0; L72.1; L81.4; L82; L85.8; L91.0; L92.3; L98.0; M65.9; M67.4; M71.2; M71.9; M86.9; M87.9; N05.2; N05.3; N08.3; N10; N11.9; N12; N13.3; N13.5; N17.0; N17.9; N18.9; N26; N28.1; N30.0; N30.2; N30.9; N34.2; N40; N41.0; N41.1; N41.9; N42.2; N45.9; N48.0; N50.0; N60.1; N60.2; N60.3; N60.4; N61; N62; N64.1; N70.0; N70.1; N72; N80.0; N80.1; N80.9; N83.0; N83.1; N83.2; N84.0; N84.1; N85.0; N85.2; N86; N87.0; N87.1; N87.9; N88.4; O00.1; O06; O41.1; O73.0; Q43.0; Q43.1; Q83.3; R02; R09.1; S36.0; T81.0) |
| Sample Types | FFPE tissue samples (stored at RT); FFPE blocks (stored at RT), histology sections (H&E and partially also special stainings and Immunohistochemistry) Digitalized slides (whole slide images) |
| Cohort Size | >1 Million patients (collection ongoing) |
| Donors | Diseased (with surgical interventions for diagnostic and/or therapeutic purposes) Age distribution: 18-99 Sex distribution (f:m): 50:50 Additional information>> |
| Associated Data | Histopathological findings, survival data, and sub-cohorts with digitized sections, further clinical data, etc. are also available; |
| Informed Consent | Broad Biobank IC (view template>>) |
| Access | as of now, collaboration preferred |
| Quality Standards | Quality management: ISO 9001:2015 (SOPs) |
| Contact | · Principle investigator: Prof. Dr. Gerald Höfler, Prof. Dr. Kurt Zatloukal · Email: biobank-pm@medunigraz.at |

View this cohort in the BBMRI-ERIC Directory:

- [FFPE Block Collection>>](#)

- [FFPE Slides Collection>>](#)

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| Publications: | For example: |
|---------------|---|
| | <ul style="list-style-type: none"> · Wulczyn E, Steiner DF, Moran M, Plass M, Reihns R, Tan F, Flament-Auvigne I, Brown T, Regitnig P, Chen PC, Hegde N, Sadhwani A, MacDonald R, Ayalew B, Corrado GS, Peng LH, Tse D, Müller H, Xu Z, Liu Y, Stumpe MC, Zatloukal K, Mermel CH. Interpretable survival prediction for colorectal cancer using deep learning. <i>NPJ Digit Med.</i> 2021 Apr 19;4(1):71. doi: 10.1038/s41746-021-00427-2. · Stumptner C, Pabst D, Loibner M, Viertler M, Zatloukal K. The impact of crosslinking and non-crosslinking fixatives on antigen retrieval and immunohistochemistry. <i>New Biotechnology</i>, Vol 52, p69-83, 2019 · Groelz D, Viertler C, Pabst D, Dettmann N, Zatloukal K. Impact of storage conditions on the quality of nucleic acids in paraffin embedded tissues. <i>PLoS One.</i> 2018 Sep 7;13(9):e0203608. doi: 10.1371/journal.pone.0203608. PMID: · Reihns R, Müller H, Sauer S, Zatloukal K. Automatic classification of histopathological diagnoses for building a large scale tissue catalogue. <i>Health Technol (Berl).</i> 2017;7(1):81-88. doi: 10.1007/s12553-016-0169-8. · Kashofer K, Viertler C, Pichler M, Zatloukal K. Quality control of RNA preservation and extraction from paraffin-embedded tissue: implications for RT-PCR and microarray analysis. <i>PLoS One.</i> 2013 Jul 31;8(7):e70714. doi:10.1371/journal.pone.0070714. · Röhr C, Kerick M, Fischer A, Kühn A, Kashofer K, Timmermann B, Daskalaki A, Meinel T, Drichel D, Bömo ST, Nowka A, Krobitsch S, McHardy AC, Kratsch C, Becker T, Wunderlich A, Barmeyer C, Viertler C, Zatloukal K, Wierling C, Lehrach H, Schweiger MR. High-throughput miRNA and mRNA sequencing of paired colorectal normal, tumor and metastasis tissues and bioinformatic modeling of miRNA-1 therapeutic applications. <i>PLoS One.</i> 2013 Jul 2;8(7):e67461. doi:10.1371/journal.pone.0067461. · Timmermann B, Kerick M, Roehr C, Fischer A, Isau M, Boerno ST, Wunderlich A, Barmeyer C, Seemann P, Koenig J, Lappe M, Kuss AW, Garshasbi M, Bertram L, Trappe K, Werber M, Herrmann BG, Zatloukal K, Lehrach H, Schweiger MR. Somatic mutation profiles of MSI and MSS colorectal cancer identified by whole exome next generation sequencing and bioinformatics analysis. <i>PLoS One.</i> 2010 Dec 22;5(12):e15661. doi: 10.1371/journal.pone.0015661. · Zatloukal K, Hainaut P. Human tissue biobanks as instruments for drug discovery and development: impact on personalized medicine. <i>Biomark Med.</i> 2010 Dec;4(6):895-903. · Pagès F, Kirilovsky A, Mlecnik B, Asslaber M, Tosolini M, Bindea G, Lagorce C, Wind P, Marliot F, Bruneval P, Zatloukal K, Trajanoski Z, Berger A, Fridman WH, Galon J. In situ cytotoxic and memory T cells predict outcome in patients with early-stage colorectal cancer. <i>J Clin Oncol.</i> 2009 Dec 10;27(35):5944-51. doi: 10.1200/JCO.2008.19.6147. · Schweiger MR, Kerick M, Timmermann B, Albrecht MW, Borodina T, Parkhomchuk D, Zatloukal K, Lehrach H. Genome-wide massively parallel sequencing of formaldehyde fixed-paraffin embedded (FFPE) tumor tissues for copy-number- and mutation-analysis. <i>PLoS One.</i> 2009;4(5):e5548. doi: 10.1371/journal.pone.0005548. · Lackner C, Gogg-Kamerer M, Zatloukal K, Stumptner C, Brunt EM, Denk H. Ballooned hepatocytes in steatohepatitis: the value of keratin immunohistochemistry for diagnosis. <i>J Hepatol.</i> 2008 May;48(5):821-8. · Asslaber M, Abuja PM, Stark K, Eder J, Gottweis H, Trauner M, Samonigg H, Mischinger HJ, Schippinger W, Berghold A, Denk H, Zatloukal K. The Genome Austria Tissue Bank (GATiB). <i>Pathobiology.</i> 2007;74(4):251-8. doi: 10.1159/000104453. |