

## Introduction

The biobanks of the CIO, RWTH cBMB, Core Facility Biobank, Cologne Biobank of the University, and Tumor bank of the UTZ and CNS tumor bank are service centers of their respective Medical Faculties and provide biobanking services to researchers of all clinical disciplines. The biobanks fulfill their tasks by systematically collecting human biomaterial, tissue samples as well as liquid samples, and the associated clinical and analytical data. Centralized data management structures have been implemented by the biobanksABCD that provide systems for pseudonymization, sample management, research-focused databases and sample order logistics. The biobanks store a wide variety of biomaterial types from different diseases, including solid tissues (diseased and healthy control), liquids (blood, plasma, serum, liquor), vital-sterile cells (bone marrow, blood), excrements (urine, faeces) and derivatives (isolated cells like buffy coats, fractions like urine sediments and isolated nucleic acids) – with the focus being complementary but overlapping from site to site. Within the framework of the CIO initiative, the biobanks have intensified their collaboration and developed an application procedure that works across all sites. If biomaterial applications cannot be served from one site, they are forwarded to the other biobanks. Thus, it is shown how the application process takes place across different sites.

## Process of application within the sites

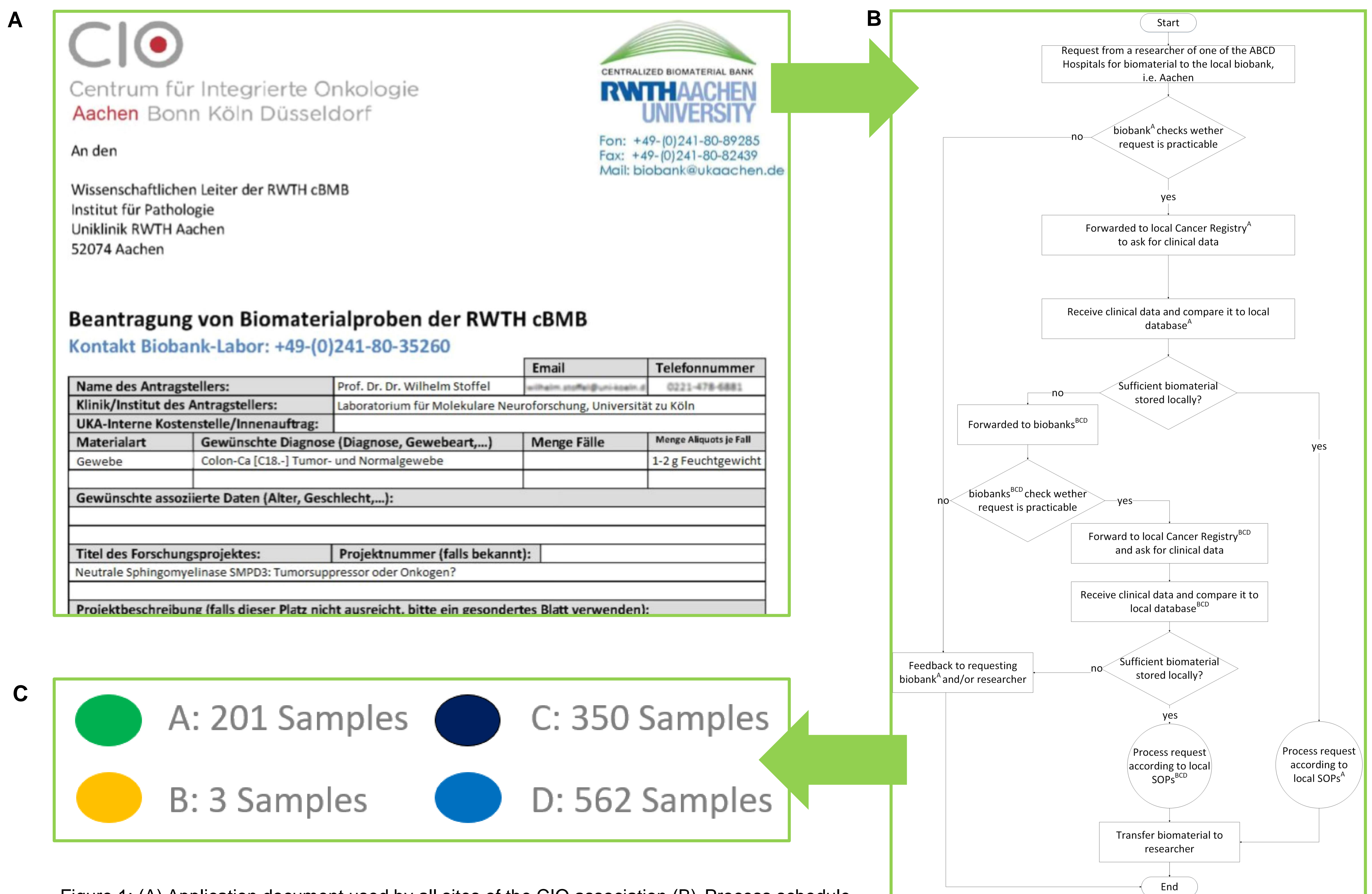


Figure 1: (A) Application document used by all sites of the CIO association (B) Process schedule for requested biomaterial (C) Number of samples stored in the CIO-Biobanks due to the application illustrated by image A

## Summary

If a detailed clinical information application is submitted, a biomaterial application is first sent to the responsible local biomaterial bank. The biomaterial bank forwards the application to the responsible CIO cancer registry and to the CIO biomaterial banks, where cases are identified with the detailed clinical information required. If samples were found for the biomaterial request, they will be made accessible to the applicant.

The aim of the CIO-ABCD initiative is to improve patient care and create synergies in research. The consolidation of the four biobank sites to BiobanksABCD increase the sample pool as well as the data contingent to serve specific biomaterial applications and create a virtual "Super Biobank".