Opportunities for advancing
biomarkers for screening and early diagnosis

About abcodia

Abcodia is a multi-award winning company engaged in the discovery and validation of biomarkers for cancer screening. Our mission is to change the way that biomarkers are developed to allow earlier diagnosis of cancer.

We aim to partner with diagnostics companies to validate biomarkers as cancer screening tools; with pharmaceutical companies to assess disease pathways; and with academic groups to help commercialise their novel markers.

We passionately believe that the best outcomes are gained through collaboration. Abcodia is keen to work with commercial and non-commercial organisations alike. We have a flexible approach and business model that allows our collaborators to make use of our unique serum biobank.

Longitudinal serum bank

Abcodia has exclusive commercial access to a longitudinal serum biobank derived from 202,000 healthy female volunteers, 50,000 of whom donated samples every year for up to 10 years whilst on the UKCTOCS trial.

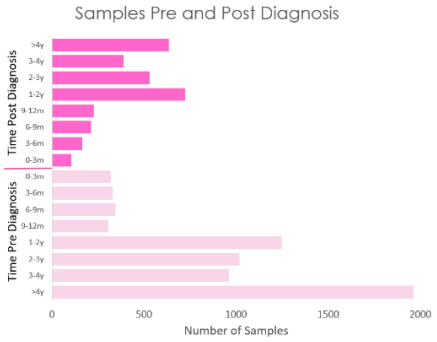
The bank now contains 27,000 cases of cancer plus the numerous diseases a major population would develop within 10 years. Each case is well annotated, with informed consent for the samples to be used for academic and commercial research. In addition, we have a large pool of healthy controls for matching on age and other demographic conditions.

All samples were collected from 13 sites across the UK and processed to the same protocol in a single accredited laboratory at University College London. They have been stored in sealed straws in liquid nitrogen at a professional biobanking facility.

Breast cancer

Of those who have donated serum, more than 4,000 subjects have developed breast cancer during the trial. We have nearly 6,500 pre diagnosis samples and approximately 3,000 post diagnosis samples available. For each woman we can access outcome data including death and metastases data.

More detailed information such as stage, grade, tumour size, primary tumour site, treatment, ER/PR/HER2 status and histology is available for a proportion of the women who developed breast cancer.

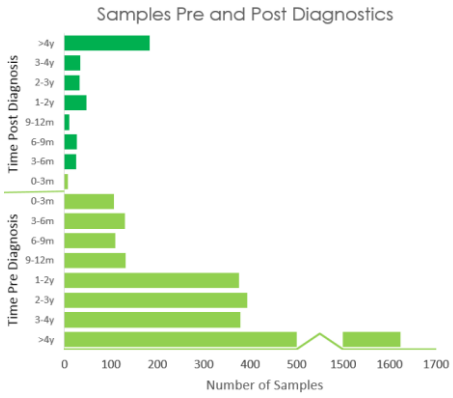


Lung cancer

The biobank holds nearly 2,000 cases of lung cancer. Of these there are 1,430 non- small cell carcinomas and 240 small cell carcinomas.

There are over 3,250 samples that are pre diagnosis and over 360 post diagnosis, often taken from the same volunteer (see graph).

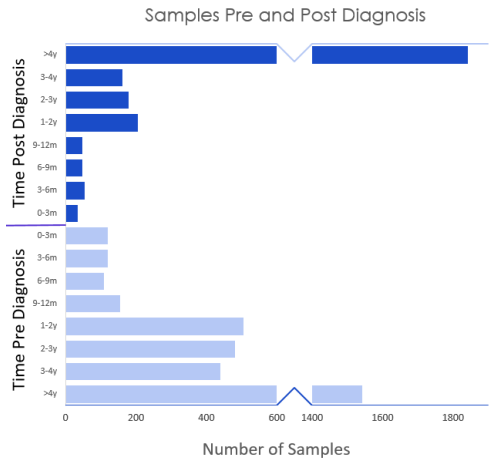
Significant demographic and phenotypic data for each subject is available to allow sample matching by age, ethnicity, lifestyle factors such as smoking, alcohol consumption, etc.



Colorectal cancer

2,350 subjects have developed colorectal cancer. There are significant numbers of both adenocarcinoma and squamous cell carcinoma. In addition to the volunteers with colorectal cancer, we also have over 400 subjects with benign or in-situ colorectal neoplasms. All subjects have donated samples before confirmed diagnosis. More than 600 subjects have donated samples annually between 1 and 7 years in advance of confirmed colorectal cancer diagnosis.

Detailed histology and pathology reports are available and cover information such as; stage, grade, tumour size, primary tumour site, treatment (surgery, chemotherapy, radiotherapy) and histology.



Other diseases

The serum bank contains numerous cases of non-cancer diseases that can be used in biomarker studies or as selectivity samples for cancer biomarker studies (for example benign colorectal polyps or inflammatory bowel disease for colorectal cancer studies).

Disease	HES Codes
Primary Hypertension	22,850
Arthritis	20,900
Asthma, COPD, Emphysema	10,250
Rheumatoid Arthritis	7,800
Atherosclerosis	7,100
Diabetes (Type 1 & 2)	6,200
Osteoporosis	2,600
Myocardial Infarction	2,000
Heart Failure	1,350
Renal Failure	1,300
Stroke	1,200
Hyperlipidaemia	1,000
AMD	750
MS	250
Lupus	200

Other cancers

The biobank contains cases of every cancer 202,000 post-menopausal women would be expected to develop over a 15-year period, in the frequencies one would expect in such a population. These samples can be used to validate markers in a particular disease, or can be used in assessing specificity of a test for another cancer, as markers can elevate in more than one cancer.

Cancer Type	No. of Cases
Cancers overall	>27,000
Breast	4,000
Colorectal	2,350
Lung (NSCLC/SCLC)	1,980 (1,430/240)
Melanoma	1,500
Uterine (Endometrial)	680 (630)
Pancreatic	680
Kidney	540
Bladder	460
Non-Hodgkin's Lymphoma	400
Stomach	370
Oesophageal	350
Leukemias	350
Brain	320
Liver	150
Thyroid	140
Multiple Myeloma	140
Cervical	90
Mesothelioma	40

Working with us

Abcodia has a collaborative business model, working in partnership with companies, academics and other groups interested in validating biomarkers for screening and early detection.

Abcodia can help through:

- Expertise in cancer screening
- Provision of clinical data around the defined cohorts
- Sample identification, control matching subaliquoting & shipping of samples
- Input into statistically powered, experimental 'screening' designs
- Ethical approvals for sample use
- Analysis of data, including longitudinal analysis, algorithm development and multiple panel analysis
- Access to clinical and commercial advisors