

Opportunities for advancing biomarkers for early diagnosis and screening and early diagnosis of cancer

About Abcodia



Abcodia is an innovative company engaged in the discovery and validation of biomarkers for the early detection and screening of cancer.

We aim to partner with diagnostics companies to validate biomarkers as cancer screening tools and with academic groups to help commercialise novel markers.

Longitudinal serum bank

For the purpose of developing tests for the early detection and screening of cancer, Abcodia has exclusive commercial access to a longitudinal serum biobank generated by its collaborator University College London (UCL). The UK Longitudinal Women's cohort (UKLWC) derives from a clinical trial involving over 200,000 healthy female volunteers, 50,000 of whom donated samples every year for up to 10 years.

The bank now contains over 25,000 cases of cancer plus the numerous diseases a major population would develop within 10 years. Each case is annotated, and informed consent has been given 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 UCL. They are stored in sealed straws in liquid nitrogen at a professional biobanking facility.

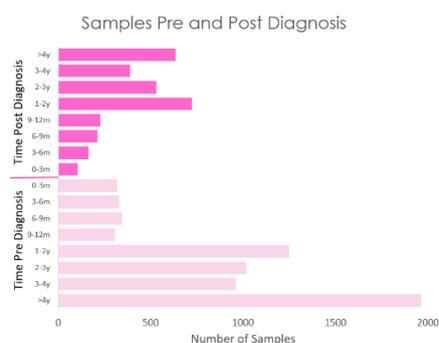


Breast cancer

Of those who have donated serum, more than 6,000 subjects have developed breast cancer during the trial.

There are approximately 6,500 pre-diagnosis samples and 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

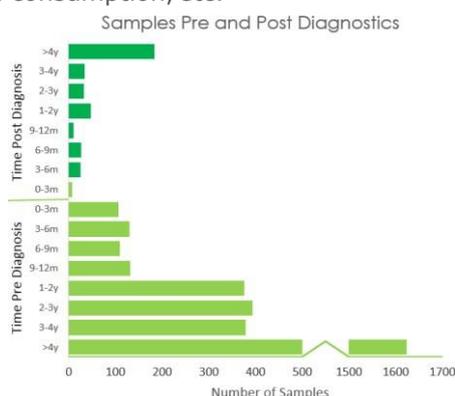


Lung cancer

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.

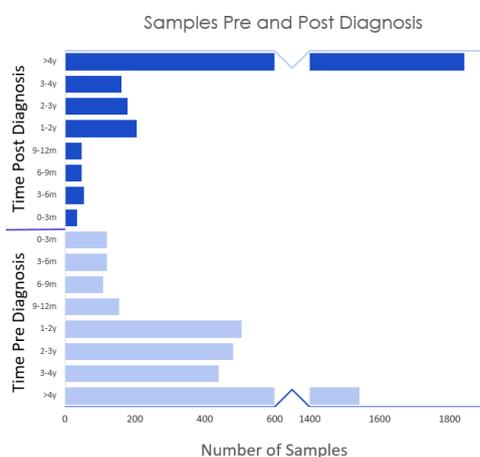
Significant demographic and phenotypic data for each subject is available to allow sample matching by age, ethnicity, lifestyle factors such as smoking, alcohol consumption, etc.



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, there 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.

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). For all enquiries outside early detection and screening of cancer, contact Professor Usha Menon at u.menon@ucl.ac.uk

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

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	6,000
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
Leukaemias	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 of cancer.

Abcodia can help through:

- Expertise in cancer screening
- Provision of clinical data on cancer morphology, date of diagnosis and stage for defined cohorts
- Sample identification, control matching sub-aliquoting & shipping of samples
- Input into statistically powered, experimental 'screening' designs
- Where necessary, ethical approvals for sample use
- Analysis of data, including longitudinal analysis, algorithm development and multiple panel analysis

