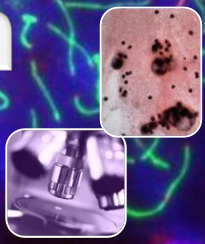
Barts Cancer Institute
Queen Mary University of London

Ovarian Cancer



Why focus on Ovarian Cancer

Over 200,000 women a year develop ovarian cancer worldwide and more than half will die of the disease. There is no screening technique, and most patients (~60%) present with advanced disease because symptoms are not easy to recognise or distinguish from other, less serious conditions. This often leads to late or mis-diagnosis.

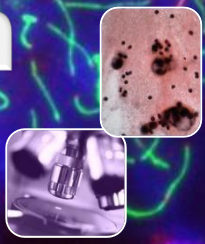
Treatment involves aggressive surgery and platinum-based chemotherapy, and progress in the last 30 years has led to the overall five year survival rate doubling such that more than 40% of women now live for at least five years. However, for the majority who present with advanced disease, more than 70% will die within five years of diagnosis. Therefore, there is a great need to develop new therapies for this disease, based upon greater understanding of its biology.

What we do

- Our focus is on translational research, aimed at developing new treatments for women with ovarian cancer.
- We are investigating the links between cancer and inflammation in the tumour microenvironment of ovarian cancer and how to target them.
- We aim to create accurate models of high grade serous ovarian cancer, the most common subtype.
- Viral gene therapies are being developed.
- We are investigating the interaction of oncolytic viruses with the host immune system.
- We are exploring the relationship between cellular DNA damage repair and adenovirus biology, particularly homologous recombination.
- Novel agents are being tested in Phase I and II clinical trials.

Barts Cancer Institute
Queen Mary University of London

Ovarian Cancer



Key Publications

- Burrell *et al*. Replication stress links structural and numerical chromosomal instability in colorectal cancer. *Nature*. 2013; 494:492-6
- Boehm *et al*. Tumour-associated inflammatory cytokines are reduced following primary platinum-based chemotherapy in plasma of high-grade serous ovarian cancer patients. *Eur J Cancer*. 2013; 49, S736-S736
- Leinster *et* . The peritoneal tumour microenvironment of high-grade serous ovarian cancer. *J.Pathol.* 2012; 227: 136-145.
- Syed *et al.* Polo-like kinase 2 is an epigenetic determinant of chemosensitivity and candidate predictor of clinical outcome in ovarian cancer. *Cancer Res*. 2011. 71; 3317
- Connell *et al.* Genomic DNA damage and ATR-Chk1 signalling determine oncolytic adenoviral efficacy in human ovarian cancer. *J Clin Invest.* 2011; 121: 1283-97.
- Coward *et al.* Interleukin-6 as a therapeutic target in human ovarian cancer. *Clin Cancer Res.* 2011; 17: 6083-96.

Who does the research

Prof. Fran Balkwill	Inflammatory cytokines and chemokines in the tumour microenvironment. Ovarian cancer models.
Dr. Michelle Lockley	Adenoviral gene therapy and Inflammation.
Dr. Sarah McClelland	Chromosomal instability.
Dr. Peter Szlosarek	Arginine deprivation therapy.

Major Funders

- Biotechnology and Biological Sciences Research Council
- Cancer Research UK
- European Research Council