

Lady Garden Foundation report 2022



Granard House
Wallace Wing



Dear Lady Garden Foundation,

We are incredibly grateful to you all for your continued generosity and commitment to The Royal Marsden Cancer Charity. Your dedication to improving the lives of gynaecological cancer patients at The Royal Marsden and across the world is truly inspirational, and I am delighted to update you on the vital work you have funded at the hospital this year.

There has been much to celebrate in 2022, and we were delighted to see the return of your signature events, as well as some new additions to the LGF event calendar, such as the Waddesdon Manor lunch. These fantastic fundraising successes were complimented by your awareness-raising campaigns including the 'Give Your Fanny Five' campaign, which took place during Gynaecological Cancer Awareness Month, keeping gynaecological health at the forefront of women's minds.

This year, you have generously expanded your funding to new and exciting areas. You are supporting the next generation of gynaecological cancer researchers by funding Andreia Fernandes' Pre-Doctoral Fellowship. She hopes to improve the follow-up experience of women treated for gynaecological cancer by taking patients' lived experiences into account. You have also supported the psychological wellbeing of gynaecological cancer patients by funding a psychosexual therapist who is helping patients talk about how their treatment has affected them sexually to help them find practical solutions to issues they face.

The second Lady Garden Foundation Scientific Committee meeting was held in July, with three high quality research proposals approved for funding. These projects, led by Dr Susana Banerjee, Dr Ben O'Leary, and Ms Marielle Nobbenhuis will not only help to find better treatments for women diagnosed with gynaecological cancer, but will also help improve the quality of life for those who have been through treatment.

You have also funded two incredibly important pieces of equipment which will improve the experience of women being treated for gynaecological cancers at The Royal Marsden. The new state-of-the-art ultrasound machine helps clinicians to give a more accurate diagnosis to patients. The three scalp cooling devices you funded are worn by patients while they receive chemotherapy to help prevent hair loss and protect their self-confidence.

Thank you so much for everything you do to transform the lives of women diagnosed with gynaecological cancers. So much of what our clinicians have achieved to improve gynaecological health would not have been possible without your support. We hope you enjoy reading about their progress in this report.

With kindest regards,

Antonia Dalmahoy
Managing Director, The Royal Marsden Cancer Charity

2022 Lady Garden Foundation achievements



3 innovative gynaecological research projects, improving treatments and quality of life for gynaecological cancer patients



1 state-of-the-art ultrasound machine to provide a fast and accurate diagnosis for patients at The Royal Marsden



3 scalp cooling devices to help prevent hair loss during chemotherapy treatment and protect patients' self esteem



1 pre-doctoral fellowship to improve the follow up experience of women treated for gynaecological cancers in the UK



1 psychosexual therapist to support patients during and after their treatment

Following the second meeting of the Lady Garden Foundation Scientific Committee in July, three high quality research proposals were approved for funding, which are led by Dr Susana Banerjee, Dr Ben O’Leary, and Ms Marielle Nobbenhuis. We are pleased to update you on the progress they have achieved so far with their research. Thank you very much for making these projects possible.



Dr Ben O’Leary, Clinical Scientist and Honorary Consultant Clinical Oncologist

Dr Susan Lalondrelle, Consultant Clinical Oncologist

Seeking genomic insights into radiotherapy-resistant gynaecological squamous cell cancers - led by Drs Ben O’Leary and Susan Lalondrelle

This pilot study aims to explore whether cervical, vaginal and vulval cancers which recur after radiotherapy, have specific changes in DNA that could be used to identify patients at a higher risk of relapse, or provide insights into why particular cancers cannot be cured by radiotherapy. Researchers will collect and analyse DNA samples from patients with gynaecological cancers taken at the time of salvage surgery - surgical treatment for local residual/recurrent lesions after definitive, non-surgical treatment - and following radiotherapy treatment. Initial preparatory work is focusing on human papillomavirus (HPV+) cancer cells, as HPV features in many gynaecological cancers.

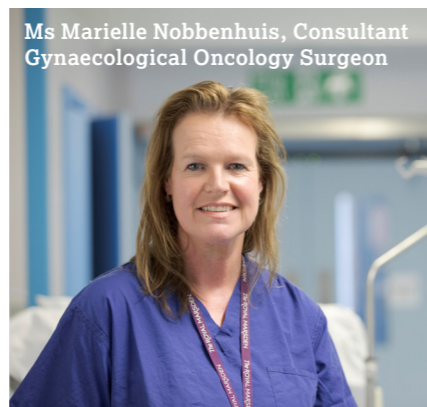
The research team recently conducted a pre-study pilot experiment on HPV+ cancer cells to explore exactly how the HPV genome integrates into the cancer DNA and what this might mean for treatment. The results have been very encouraging and early analysis indicates that it will enable the researchers to detect the exact points at which the HPV virus enters the host genome. The next step will be to test this on a small number of clinical samples.

Fat Tissue Grafting to Treat Symptoms of Vaginal Stenosis in Women with Gynaecological Cancer - led by Ms Marielle Nobbenhuis

Cervical cancer and its associated treatments, especially radiotherapy, can cause several changes in the vagina such as narrowing, shortening, dryness and bleeding, known as vaginal stenosis. Consequently, women can experience significant pain during sex, loss of sexual pleasure and some women become unable to have sex. This can, in turn, cause sexual avoidance, relationship problems, feelings of low self-esteem, isolation and difficulties initiating new relationships.

Last year, a new surgical technique called ‘Fat Tissue Grafting’ was used on a patient with severe vaginal stenosis following radiotherapy treatment for advanced cervical cancer at The Royal Marsden. The technique uses fat tissue that is removed from other parts of the body - usually the thighs, belly, and buttocks - by liposuction, which is then prepared and injected into the vagina area to generate more elasticity and improve the quality of the vaginal tissue. Following the procedure, this patient experienced a reduction in vaginal bleeding and pain, and a noticeable improvement in the size of the vagina, allowing for penetrative sex.

This feasibility study will examine the surgical experience and outcome for women who have undergone the fat tissue grafting procedure. Set-up of the study is underway and the research team is meeting regularly. Patient recruitment is expected to begin in April 2023.



Ms Marielle Nobbenhuis, Consultant Gynaecological Oncology Surgeon

Assessing the reasons for PARP inhibitor resistance in some women with ovarian cancer - led by Dr Susana Banerjee

PARP inhibitors, such as the drug Niraparib, have transformed the care of women worldwide with newly-diagnosed and recurrent ovarian cancer, helping to increase remission rates, however, they do not work for all women with ovarian cancer and for some, resistance can develop, causing the cancer to worsen or return.

Circulating tumour DNA sequencing, known as ‘liquid biopsies’- simple blood tests that can be used to help find cancer - provide a convenient and non-invasive way to assess and monitor the development of PARP inhibitor resistance in patients.

This trial, led by Dr Banerjee, is collecting blood and tumour samples from women with newly diagnosed, or relapsed ovarian cancer, who are being treated with Niraparib and who are enrolled in The Royal Marsden sponsored Monitor-UK study. It is using a targeted sequencing gene panel developed by the Institute of

Cancer Research and The Royal Marsden to detect mutations or changes in specific genes known to be implicated in the development of PARP inhibitor resistance. Dr Banerjee’s team has received ethical approval for this trial and began collecting samples from patients in November of this year.



Dr Susana Banerjee, Consultant Medical Oncologist

Our thanks to Lady Garden Foundation for £365,811 for funding all three exciting research projects.



Psychosexual therapist provides vital support for Royal Marsden patients



Caroline Lovett, Psychosexual Therapist

Caroline Lovett, a psychosexual therapist at The Royal Marsden, works with women with gynaecological cancers who often undergo gruelling treatments. She provides them with valuable psychological support to help them to process what they have been through, as well as practical solutions to promote their sexual wellbeing, post-treatment. Lady Garden Foundation is generously funding her post for this current financial year.

The experience of having gynaecological cancer and undergoing treatment can alter how women view themselves sexually and psychologically, supporting these women is vital to help them deal with the impact of having this cancer on their lives. For example, for some women may not be able to feel sexual pleasure in the same way they had previously. Caroline helps women to be creative and discover new ways that they can experience pleasure by exploring the whole self as a sexual being.

Caroline also supports patients in their physical rehabilitation after treatment. Women who receive radiotherapy are often given vaginal dilators to use to open or stretch vaginal tissue so that it is comfortable for them to have penetrative sex. For women who find the dilators uncomfortable, Caroline has introduced

new approaches, such as the use of lubricants to help ensure women are using the dilators and benefiting from the treatment.

Caroline sees women either on a one-to-one basis, or with their partners. Most have around ten sessions, but this can vary depending on what they are working through. Patients can self-refer to Caroline but they often come through the clinical nurse specialists or their consultants.

One patient who attended sessions with Caroline said “You have helped me find that part of myself that I thought the cancer had stolen”.

As part of her role, Caroline is establishing a menopause support group at the hospital along with her colleagues in the psychological support team. The group is intended for women who have gone through the menopause as a result of their treatment, and the first meeting will be held in January 2023. Caroline and the team hope that women attending this group can help each other by sharing their experiences.

Thank you so much for your donation of £60,422 to fund this role.

Equipment

Over the past year, Lady Garden Foundation has generously funded two valuable pieces of equipment at The Royal Marsden, helping to deliver the very best care for gynaecological cancer patients.

Ultrasound machine

Ultrasound is a non-invasive imaging method that, when performed by an experienced diagnostician, can play a valuable role in the primary diagnosis of gynaecological cancers. It can also help detect recurrent and/or metastatic disease and diagnose and guide treatment of postoperative complications.

The MIS Samsung RS85 Prestige model, a new state-of-the-art ultrasound machine, has arrived at the hospital and was used for the first time, in the new ultrasound room at our Chelsea site on 5th December.

The premium ultrasound system generates uniform, high-resolution images and has intelligent software features that fine tune image quality in specific situations, providing measurements, assessments of blood flow, and other useful metrics to provide a fast and accurate diagnosis for patients.

Thank you so much for your donation of £70,000 to fund this new ultrasound machine.



MIS Samsung RS85 Prestige Ultrasound machine



Paxman scalp cooler

Scalp cooler machines

The impact of chemotherapy treatment on many cancer patients can result in the loss of hair from the scalp and body, including eyebrows and eyelashes.

Scalp coolers are tightly fitting, helmet-like hats filled with a cold gel or liquid that can be worn before, during and after chemotherapy sessions. They work by narrowing the blood vessels beneath the skin of the scalp, which reduces the amount of chemotherapy medicine that reaches the hair follicles. Sensors inside the cap ensure the scalp is kept at a constant temperature. By cooling the scalp in this way, hair loss is reduced which can significantly improve patients' self-esteem.

We are so grateful to Lady Garden Foundation for funding three double scalp coolers, thereby providing six caps for use by cancer patients. The scalp coolers are popular with patients and each cap is used between 3-5 times per day.

Feedback provided shows that patients value using the coolers which have helped them to better cope emotionally with their cancer treatment, easing any further distress.

A patient who used a scalp cooling cap during her treatment said: “Being able to keep my hair during chemo kept me feeling whole during a time I felt I had no control.”

Thank you so much for your donation of £31,500 to fund these scalp coolers

Pre-Doctoral Fellowship – ‘Development of a safe and personalised follow-up approach for women with gynaecological cancer’



Andreia Fernandes, Lead Nurse for Gynae-oncology and Lady Garden Foundation Fellow

This Pre-Doctoral Fellowship is being undertaken by Andreia Fernandes, who has been Lead Nurse for Gynae-oncology at The Royal Marsden since 2019.

The Fellowship programme enables participants to undertake research for up to a year, full-time, to develop their research skills and produce the necessary data to springboard onto a National Institute for Health Research (NIHR) Clinical Doctoral Research Fellowship (CDRF) or another appropriate scheme, to undertake their doctorate.

Andreia has more than 15 years of clinical and research experience in gynae-oncology across a variety of roles and is passionate about improving outcomes and experiences for women with gynaecological cancer. She has authored and co-authored several publications, including journal articles and book chapters. Her ambition is to be a consultant nurse and a leading academic researcher in gynaecological cancers.

Andreia is nine months into her 12 month fellowship, investigating the way women are monitored after their treatment for primary gynaecological cancer. Her project is the first of its kind and she hopes that by taking women's lived experiences into account, follow-up care can be shaped to improve the way it is

delivered. Ultimately, Andreia hopes this study will change national policy and guidelines for the delivery of follow-up, improving the experience of women treated for gynaecological cancers across the UK.

Since beginning her Pre-Doctoral Fellowship, she has conducted a systematic review of studies in this area, capturing women's lived experiences from qualitative studies. She has also reviewed international guidelines of follow-up after treatment for gynaecological cancer for comparative purposes. She has contacted the International Journal of Gynaecological Cancer which has expressed interest in publishing an article about her Fellowship project. She plans to progress to a PhD in 2023 and the work completed during this Fellowship will inform her doctoral research proposal. On behalf of Andreia and the rest of the Gynaecology unit at The Royal Marsden, thank you so much for your gift of £69,804 to support this Pre-Doctoral Fellowship this year.

Below we share updates from the following projects that were given funding by the Lady Garden Foundation Scientific Committee in March 2021

Update on Endometrial Cancer Profiling programme at The Royal Marsden- led by Dr Angela George

This project is testing the molecular make-up of all cases of endometrial cancer at The Royal Marsden over a one year period, along with 100 retrospective cases, to predict the behaviour of an individual's tumour, which can help determine how best to treat the disease. This is important as the diagnosis and classification of endometrial cancer is complex. The disease is highly variable, while some cases have a good prognosis, in others the cancer behaves aggressively and worsens.

Dr George's team is examining the impact of this testing on patient outcomes with the aim to potentially direct treatment accordingly. A key focus is on identifying patients who would benefit from immunotherapy, rather than chemotherapy, to ensure the best possible outcome.

Recruitment of patients began in June 2021 and ended in May 2022. Dr George's team has now completed all of the testing for newly diagnosed patients and are awaiting the final batch of results from those who have relapsed.

To date, the testing has identified a number of individuals who will not require additional treatment (such as radiotherapy) thanks to identifying POLE mutations in their tumour, which hugely reduce the chance of cancer recurrence. The team has also identified a number of individuals with high-risk disease, who would not have been predicted by their other tumour factors, who require additional treatment to cure the disease.

The provisional data has formed part of a submission to NHS England and this has resulted in POLE testing being added to the National Genomic Test Directory earlier this month. This genetic testing is delivered at the Genomic Hub Laboratory that The Royal Marsden is part of (The North Thames Genomic Laboratory Hub).

Any clinician in the UK can now send samples to RMH for testing, but uptake is not expected to be widespread until testing is able to be offered by the other six Genomic Hub Laboratories, which are yet to develop and validate this. The goal is to make this type of genetic testing available on the NHS for all endometrial cancer patients in the future, making a significant difference to those with a diagnosis of endometrial cancer.

The research team has also identified a number of potentially targetable mutations in patients and, if the mutations are common in those with relapsed disease, this could lead to the development of new clinical trials for these patients. This has the potential to further expand treatment options for patients with endometrial cancer.



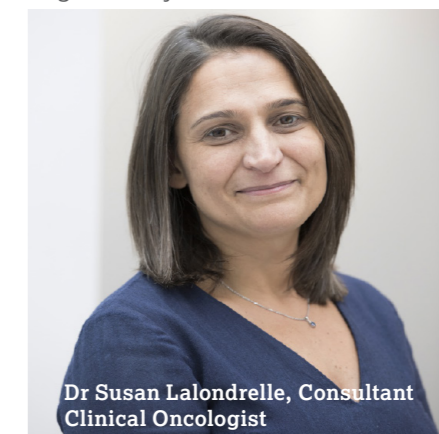
Dr Angela George, Consultant Medical Oncologist

TROPICCANA trial: Using blood samples to monitor the persistence and recurrence of cervical cancer following chemoradiation treatment- led by Dr Susan Lalondrelle

This trial will evaluate whether a simple blood test can be used to monitor how women with cervical cancer respond to chemoradiation treatment - which combines chemotherapy with radiation therapy - and also to detect relapse of the condition.

The clinical trial TROPICCANA (Treatment Response In Cervix Cancer Assessed by circulating HPV DNA) will test the hypothesis that if no circulating HPV DNA is detectable three months after treatment is completed, this will show that treatment has been successful. The researchers will also study if cHPV DNA is re-detected when the patient relapses.

There has been a slight delay to the project due to unforeseen, reduced capacity in the clinical unit. The protocol and associated trial documents have now been finalised and patient recruitment for the trial will begin next year.



Dr Susan Lalondrelle, Consultant Clinical Oncologist

Using machine learning to improve radiotherapy planning for gynaecological cancer- led by Dr Alexandra Taylor

Machine Learning (ML) models have shown promising results for improving contouring accuracy for drawing around tumours although there is little experience to date of how to evaluate and integrate these methods into the radiotherapy planning process. This project is investigating how to develop and integrate ML models for use in treating cervical cancer. It aims to improve accuracy in radiotherapy and ultimately improve the overall quality of treatment for patients.

Dr Katherine MacKay, a clinical research fellow, is leading this project. She has developed the datasets used to train the ML model for auto-contouring cervical cancer images and produced a pilot clinical assessment tool which will enable structured evaluation of which auto-contours can be used.

Over the next year, the ML model auto-contouring results will be reviewed and then applied to a cohort of patient scans, to see if the results are reproducible. The contours produced by the auto-contouring model will also be compared to contours produced manually by at least five clinicians. The clinical assessment tool developed by the researchers will be used to evaluate the results.

Thanks to generous funding from Lady Garden Foundation these Machine Learning approaches will help transform how radiotherapy treatments are planned and delivered in the UK for gynaecological cancer patients in the future.

Dr Alexandra Taylor, Consultant Clinical Oncologist



Predicting treatment benefit in low grade serous ovarian cancer (LGSOC)- tumour and liquid biopsy mutation analysis- led by Dr Susana Banerjee

Low grade serous ovarian cancer, a rare type of ovarian cancer, often affecting younger women, does not respond well to standard chemotherapy and further research is urgently needed to develop more effective treatments. Dr Banerjee is seeking to determine whether mutations in a gene named KRAS, and others, can be detected in the blood of patients with LGSOC, to help identify which patients will benefit from treatment.

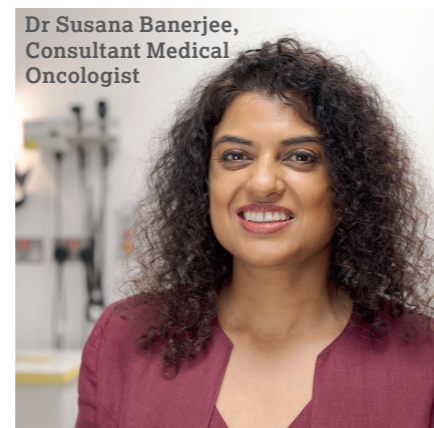
The project, which is managed by Dr Shira Hasson in Dr Banerjee's team, is also looking at whether the presence of KRAS gene mutations changes over the course of treatment, and if this might indicate a clinical response to treatment. This will help guide further trials on treating and monitoring LGSOC patients. It could mean in future that patients with low grade serous ovarian cancer can undergo blood tests, instead of invasive biopsies. Blood tests could also potentially provide a way of monitoring the development of this type of cancer and its response to treatment.

Existing blood and tumour samples from more than 40 patients who had already consented to an earlier study at The Royal Marsden (called 'The Biomarkers in Gynaecological Cancers Study', also led by Dr Susana Banerjee) are being used for the LGSOC project.

Last December the gene panel analysis of tumour samples began to test for specific mutations, including the KRAS mutation, at the Centre for Molecular Pathology at The Royal Marsden's Sutton site. Initial analysis of blood and tumour samples to try and detect KRAS mutations began in March of this year. So far, 20 tumour samples and 11 blood samples have been tested.

Dr Banerjee's team will produce a final report on the findings of this project in July 2023.

Dr Susana Banerjee, Consultant Medical Oncologist



Oak Cancer Centre

Lady Garden Foundation has generously donated £100,000 to fund a consulting room in the Outpatient Department of the new Oak Cancer Centre (OCC) for which we are most grateful.

Construction of the OCC continues to make excellent progress, with several milestones achieved. The final panel of window glazing has been fitted, so the building is now fully watertight. The sawtooth roof over the atrium has been completed, with light now streaming in from above. The unveiling of the main atrium marks a milestone moment in construction.

The building works will finish at the end of this year and researchers will move in from January with patients moving in before the summer.

Thank you so much for your generous support of the Oak Cancer Centre which we greatly appreciate. We're looking forward to showing you around the building when it opens next year.



COVID-19 research survey updated by Dr Susana Banerjee

Dr Banerjee is Chair of the ESMO Resilience Task Force and led a study aimed at better understanding the experiences and perspectives of NHS oncology staff, across a range of different roles, who delivered cancer care throughout the COVID-19 pandemic.

The COVID-NOW (COVID-19 Work Ability and Wellbeing NHS Oncology Workforce) study sponsored by The Royal Marsden NHS Foundation Trust involved two surveys focusing on work, wellbeing and lifestyle factors affecting staff during the first wave of COVID-19 in July/August 2020, and then one a year on during the second peak in March/April 2021.

The second, most recent survey involved a total of 658 participants which included doctors, nurses, allied health professionals, management and administrative staff. Questions focused on the impact and changes to the working lives of staff due to the pandemic, including to their job roles, as well as on their health and wellbeing and coping abilities.

This is the largest UK study to date on the impact of COVID-19 on wellbeing in the oncology workforce and Dr Banerjee presented its findings at the National Cancer Research Institute meeting in 2020. She hopes that valuable insights from the study will help guide support measures for UK Oncology professionals and organisations in the future, as the world continues to adapt to COVID-19 and amidst other considerable challenges facing the UK healthcare sector.



ATARI Trial

Part funded by Lady Garden Foundation and also pharmaceutical firm AstraZeneca, this ground-breaking trial led by Dr Banerjee, aims to revolutionise treatment options for women with rare, relapsed or advanced gynaecological cancers.

Currently, less than one in ten of women with rare, relapsed or advanced gynaecological cancer will see tumour shrinkage with chemotherapy and cancer worsens, typically, in 2-3 months. However, laboratory results indicate that one in six women may have a greater chance of benefiting from a class of drug called ATR inhibitors.

This international, multi-site trial tests an ATR inhibitor, known as Ceralasertib, on its own and also in combination with the PARP inhibitor drug, Olaparib.

A total of 103 patients have been recruited for this trial across the UK (London, Manchester, Edinburgh, Glasgow and Bath) and in France and Canada.

Dr Banerjee hopes to share initial findings of the trial at the ESMO Gynaecological Cancers Congress in February 2023.

This exciting trial has the potential to help change standard care for these women. It could also help develop a greater understanding of which patients will benefit from this new treatment option.

Thank you to everyone at Lady Garden Foundation for so generously supporting this project.



Thank you

It has been an action-packed year for Lady Garden Foundation, which is reflected in this report and the many projects you are supporting at the hospital. By expanding your support into new areas, such as the psychosexual therapist, you are helping to support women at all stages of their gynaecological cancer journey.

You are also helping to develop the next generation of gynaecological cancer researchers by supporting Andreia Fernandes' Pre-Doctoral Fellowship and the young researchers who work alongside the consultants on their research projects.

We hope you have enjoyed reading about the incredible progress made to improve the lives of those diagnosed with gynaecological cancer, thanks to your generous support. We are so proud to work alongside you and we are excited to see what progress will be made in 2023. From all of us at The Royal Marsden Cancer Charity, thank you to the Lady Garden Foundation founders, trustees and committee members for your inspirational support of women affected by gynaecological cancers.

