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Comparing the decisions for the diagnosis and care of patients with sarcoma made by a standard-of-care sarcoma multidisciplinary team with a multidisciplinary team using the advances in data analysis of the electronic patient record, DNA/RNA sequencing and imaging with OxPOS-NAVIFY® decision support

Submission date
04/05/2021

Recruitment status
Recruiting

Registration date
09/02/2023

Overall study status
Ongoing

Last Edited
21/01/2025

Condition category
Cancer

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[X] Record updated in last year

Plain English summary of protocol

Background and study aims

Advances in technology have the power to improve the accuracy of diagnosis and the potential to inform new treatments for cancer. This study will combine cutting-edge technologies to allow testing whether this is true for a rare and complex group of cancers called sarcoma. A sarcoma is a type of cancer that arises from connective tissue cells (such as bone, cartilage, and fat). These cancers can occur anywhere in the body, require teamwork to treat effectively and require surgery and cancer toxic treatments to cure.

The question addressed in this study is whether the integration of new technologies can result in measurable improvements in care for participants with sarcoma. These technologies include new cancer DNA and RNA sequencing tests that determine the basis of an individual cancer, new analysis of body scans and new deeper integrated analysis of all the data obtained, including cost-effectiveness. Sarcoma patients will be invited to consent by sarcoma clinicians that are involved in their diagnosis and treatment in the Oxford sarcoma multidisciplinary team. All study participants will receive standard-of-care treatment throughout. They will be asked to provide an extra blood test and use of excess diagnostic material for sequencing tests, consent for a study-specific additional CT or ultrasound-guided biopsy only if their sarcoma later progresses, and their data in the electronic patient record including scan images and completion of questionnaires. All the data collected will comply with data protection legislation including being pseudonymised (direct identifiers removed), but a link to direct identifiers remains so that, depending on participant consent, the study analysed data may be returned for use by the standard of care Sarcoma MDT and communication back to the study participant and GP. Participants will be invited to complete questionnaires related to psychological wellbeing and

quality of life before and after a clinic appointment that will communicate the personalised study results. How the MDT clinicians make MDT decisions using the new data will also be assessed. The pseudonymised data is stored securely in the hospital clinical data warehouse and transferred for analysis using software in a secure UK-based data cloud. The analysis may offer additional findings that are helpful to the care of each participant, and to the care of sarcoma patients overall.

Who can participate?
Patients diagnosed with high-grade sarcoma and a life expectancy of 12 weeks or more from the time of diagnosis

What does the study involve?
Patients will be selected and invited to consent to the study by sarcoma clinicians who are involved in their diagnosis and treatment in the sarcoma multi-disciplinary team in Oxford. All patients will receive their standard of care treatment as normal. Excess material from their tumour biopsy or surgery will be used to fingerprint the tumour, and in some cases, this will be compared to results from a second sample from a tumour that might have appeared after treatment (at relapse). Consent for a second biopsy procedure may be requested. Patients will also be invited to complete questionnaires related to psychological wellbeing and quality of life before and after an optional clinic appointment with their sarcoma doctor and the research team. This clinic aims to communicate the findings from a deeper analysis of the information and results.

What are the possible benefits and risks of participating?
All the data will comply with data protection legislation including being anonymised so that there are no personal identifiers and stored securely in the hospital database and a secure data cloud.

Where is the study run from?
Oxford University Hospitals NHS Trust (UK)

When is the study starting and how long is it expected to run for?
June 2021 to January 2027

Who is funding the study?
F. Hoffmann-La Roche (Switzerland)

Who is the main contact?
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Contact information

Type(s)
Scientific

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Additional identifiers

EudraCT/CTIS number
Nil known

IRAS number
299632

ClinicalTrials.gov number
Nil known

Secondary identifying numbers
IRAS 299632, 2171_UK_01_OXPOS, CPMS 55266

Study information

Scientific Title
Oxford Precision Oncology for Sarcoma (OX-POS): a prospective, longitudinal, observational study with integration of NAVIFY® pathway decision support

Acronym
OxPOS-NAVIFY

Study objectives
Does adoption of the step changes that have occurred in multi-modal advanced genomic technologies, digital tools, and analytics, result in measurable improvements in outcomes, including cost-effectiveness, for patients with complex rare cancers such as sarcomas?

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 23/03/2022, South Central - Oxford C Research Ethics Committee (Health Research Authority [Bristol], Ground Floor, Temple Quay House, 2 The Square, BS1 6PN, UK; +44 (0)207 104 8241; oxfordc.rec@hra.nhs.uk), ref: 22/SC/0054

Study design
Single-centre observational cohort study, with an internal blinded comparison where each patient acts as their own control

Primary study design
Observational

Secondary study design
Cohort study

Study setting(s)
Hospital

Study type(s)
Diagnostic

Participant information sheet
Not available in web format, please use contact details to request participant information sheet

Health condition(s) or problem(s) studied
High-grade sarcoma

Interventions
This study will be a single-centre observational cohort study, with an internal blinded comparison where each patient acts as their own control. The study will involve the systematic and prospective collection, analysis, and integration of longitudinal and extensive genomic data, imaging, and clinical data associated with patient outcomes in 250 high-grade sarcoma patients, that have hitherto not been prospectively integrated together.

The study is based on the premise of achieving high dimensional prospective data collection in a sufficient number of patients to allow for credible and comprehensive evaluation of the scope of the precision approach and its cost-effectiveness in a specified context of rare cancers. Patients will undergo informed consent following a patient information sheet, data analysis and sharing will be anonymised and the protocol will conform to local ethical committee approval.

In the initial phase, a comparison will be made between the standard of care sarcoma multidisciplinary team (MDT) decision, and this protocol delivering the precision oncology MDT decision (OxPOS-NAVIFY®).

Intervention Type
Other

Primary outcome measure
Number of patients with high-grade sarcoma who have additional pathway options as a result of the OxPOS-NAVIFY® MDT analysis compared to standard of care, measured from the time of the standard sarcoma MDT decision to the study completion

Secondary outcome measures
1. Number and type of either diagnostic or actionable genomic variants identified using a Foundation Medicine panel and extended genomic sequencing platforms at the initial diagnostic timepoint
2. Longitudinal outcome of tumour growth rate evaluation (delta-radiomics), including heterogeneity analysis integrated with genomics, at the diagnostic timepoint to the study completion
3. Number and types of germline findings using an extended validated variant panel at the

diagnostic timepoint
4. Approved ISO/IEC 9126-4 metrics of effectiveness, efficiency and satisfaction related to OxPOS-NAVIFY® workflow at the diagnostic and the beginning of each standard of care treatment intervention timepoints, to the study completion
5. Longitudinal analysis of cognitive burden and confidence of decision-making of clinicians using CSQU and NASA task load questionnaires and semi-structured interviews up to six timepoints spaced between 3-36 months after the diagnostic timepoint
6. Longitudinal analysis of the patient-reported psychological impact and quality of life measured using HADS score and EORTC-QLQ-C30 at the diagnostic, prior to and 3-6 months after the OxPOS clinic
7. Overall survival and progression-free survival analysed by Kaplan–Meier survival and measured from patient records from the diagnostic timepoint
8. Supervised machine learning classifiers for diagnostic groups and treatment responders e.g. in relation to overall survival, progression-free survival, and quality of life from the diagnostic timepoint to the completion of the study
9. Cost-effectiveness analysis and causal inference based on cost per event measured using NHS costings relative to the additional pathway options resulting from the OxPOS-NAVIFY® MDT analysis, from the diagnostic timepoint to the completion of the study

Overall study start date
01/06/2021

Completion date
31/01/2027

Eligibility

Key inclusion criteria
For study participants:
1. Adult male or female aged 18 years and above
2. Diagnosis of high-grade sarcoma (Grade 2/3) on either a diagnostic or surgical sample confirmed by the Oxford
sarcoma MDT
3. Participant able to undergo all clinical treatments and follow-up coordinated by the Oxford Sarcoma supra-regional
MDT
4. Willing and able to provide signed informed consent for OxPOS-NAVIFY®, including for additional blood sampling
FMI and other genomic analysis, and collection of clinical data
5. Able to complete questionnaires for participant-reported outcomes
6. Life expectancy greater than 12 weeks from diagnosis

For MDT participants:
1. Member of the standard of care Oxford Sarcoma MDT of OXPOS MDT
2. Clinician involved in sarcoma care decision making
3. Willing and able to provide signed informed consent

Participant type(s)
Patient

Age group

Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
250 sarcoma patients, 17 sarcoma MDT participants

Key exclusion criteria
For study participants:
1. Age less than 18 years
2. Sarcoma managed by another hospital or sarcoma MDT
3. Exclusion from biopsies if there is a known contraindication, such as a hypersensitivity to CT contrast media

For MDT participants:
1. Conflict of interest with the OxPOS study

Date of first enrolment
01/02/2023

Date of final enrolment
01/03/2026

Locations

Countries of recruitment
England

United Kingdom

Study participating centre
Churchill Hospital
Oxford University Hospitals NHS Foundation Trust
Headington
Oxford
United Kingdom
OX3 7LE

Sponsor information

Organisation

Roche (Switzerland)

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Sponsor type
Industry

Website
http://www.roche.ch/en/index.htm

ROR
https://ror.org/00by1q217

Funder(s)

Funder type
Industry

Funder Name
F. Hoffmann-La Roche

Alternative Name(s)
Hoffman-La Roche, F. Hoffmann-La Roche Ltd.

Funding Body Type
Private sector organisation

Funding Body Subtype
For-profit companies (industry)

Location
Switzerland

Results and Publications

Publication and dissemination plan

Planned public domain open access publications. Even though the protocol will only recruit from one site (Oxford), and is internal to the institution, the protocol may be available with agreement after favourable ethical approvals.

Intention to publish date
01/12/2028

Individual participant data (IPD) sharing plan
Data will be accessible via public domain databases. Forward IP will be secured before publication. All data in the study is subject to informed consent from patient and study participants. De-identified raw clinical data will be available from the study funder on request (F. Hoffman-La Roche Ltd) and will be made available as part of the purposes of peer review and publication. Genomic DNA and RNA sequencing raw data will be deposited as part of the publication process at the end of the study, in public domain repositories with linked clinical annotation, imaging data and specific secondary analysis linked to the study.

IPD sharing plan summary
Stored in publicly available repository