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Neoadjuvant trial of pre-operative exemestane or letrozole +/- celecoxib in the treatment of oestrogen receptor-positive early breast cancer

Submission date
02/06/2006

Recruitment status
No longer recruiting

Registration date
11/07/2006

Overall study status
Completed

Last Edited
15/09/2022

Condition category
Cancer

[X] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol
https://www.cancerresearchuk.org/about-cancer/find-a-clinical-trial/a-trial-looking-at-aromatase-and-cox-2-inhibitors-before-surgery-for-post-menopausal-early-breast-cancer

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Additional identifiers

Protocol serial number
BR3031

Study information

Scientific Title
Neoadjuvant trial of pre-operative exemestane or letrozole +/- celecoxib in the treatment of oestrogen receptor-positive early breast cancer

Acronym
NEO-EXCEL

Study objectives
The hypotheses to be addressed in this bifactoral phase III trial are that exemestane may be superior to letrozole (the present standard of care), as primary neoadjuvant endocrine therapy for early stage oestrogen receptor (ER)-positive breast cancer in postmenopausal women, and that the activity of aromatase inhibitors in this setting may significantly be enhanced by the addition of the selective cyclooxygenase-2 (COX-2) inhibitor, celecoxib.

Ethics approval required
Old ethics approval format

Ethics approval(s)
West Midlands MREC, 21/07/2006, ref: 06/MRE07/31

Study design
Prospective phase III multicentre bifactorial (four-arm) randomised clinical trial with both open-label and placebo-controlled comparisons

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Early breast cancer

Interventions
Subjects will be randomised (1:1:1:1) to receive either:
1. Exemestane + celecoxib (these patients will receive exemestane 25 mg, one tablet daily and celecoxib 400 mg, one tablet twice daily)
2. Exemestane + celecoxib-placebo (these patients will receive exemestane 25 mg, one tablet daily and celecoxib-placebo, one tablet twice daily)
3. Letrozole + celecoxib (these patients will receive letrozole 2.5 mg, one tablet daily and celecoxib 400 mg, one tablet twice daily)
4. Letrozole + celecoxib-placebo (these patients will receive letrozole 2.5 mg, one tablet daily and celecoxib-placebo, one tablet twice daily)
Treatment will continue for 16 weeks until day of surgery.

Intervention Type
Drug

Phase
Phase III

Drug/device/biological/vaccine name(s)
Exemestane, letrozole, celecoxib

Primary outcome(s)
Objective clinical response (complete response [CR], partial response [PR]) to neoadjuvant treatment

Key secondary outcome(s))
1. Objective ultrasound-determined response (CR, PR) to neoadjuvant treatment
2. Type of surgery
3. Axillary lymph node involvement at surgery
4. Complete pathological response
5. Local recurrence-free survival
6. Progression-free survival
7. Overall survival
For translational sub-study: biological profiling for prognostic and predictive indicators

Completion date
01/04/2019

Eligibility

Key inclusion criteria
1. Biopsy proven
2. ER positive invasive breast cancer (where ER positive is defined as equivalent to an ER Quick or Allred score of 3 or greater)
3. Tumour, measured on clinical examination, as greater than 2 cm in diameter
4. Postmenopausal
5. Adequate haematological, renal and liver function, defined as: platelets of greater than 100 x 10(9)/l, white blood cell count of greater than 3 x 10(9)/l, creatinine less than 110 mmol/l, aspartate aminotransferase (AST) and/or alanine aminotransferase (ALT) less than 1.25 x upper limit of normal

6. Patients must be fit to complete surgery for their breast cancer
7. Written informed consent
8. Eastern Cooperative Oncology Group (ECOG) performance status 0,1 or 2

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Sex
Female

Total final enrolment
269

Key exclusion criteria
1. Bilateral breast cancer
2. Evidence of distant metastases (M1)
3. Patients who have received previous treatment for breast cancer
4. Concomitant active malignancy except for adequately treated carcinoma in situ of the uterine cervix or basal cell carcinoma of the skin
5. Co-morbid disease which would preclude safe surgical treatment of the primary cancer
6. Other physical or psychiatric disorder that may interfere with subject compliance, adequate informed consent or determine the causality of adverse events
7. Contraindications to celecoxib: active peptic ulcer disease, renal impairment, asthma exacerbated by non steroidal anti-inflammatory drugs (NSAIDs), congestive cardiac failure (New York Heart Association [NYHA II-IV]), ischaemic heart disease, cerebrovascular disease, uncontrolled hypertension
8. Patients with an ongoing requirement for regular NSAID or COX-2 inhibitor therapy (asprin 75 mg daily is permitted)
9. Regular selective COX-2 inhibitor use in the two years prior to randomisation
10. History of hypersensitivity to celecoxib, exemestane or letrozole or to any of the excipients
11. Known hypersensitivity to sulphonamides
12. Patients who have experienced asthma, acute rhinitis, nasal polyps, angioneurotic oedema, urticaria or other allergic-type reactions after taking acetylsalicylic acid or NSAIDs including COX-2 inhibitors
13. Inflammatory bowel disease
14. Patients with ongoing requirements for fluconazole or ketoconazole therapy
15. Patients with ongoing requirement for lithium therapy
16. Patients with ongoing requirement for angiotensin-converting enzyme (ACE) inhibitor therapy
17. Patients who are anticoagulated

Date of first enrolment
07/08/2007

Date of final enrolment

29/04/2014

Locations

Countries of recruitment
United Kingdom

England

Scotland

Study participating centre
Barnet Hospital
Barnet
United Kingdom
EN5 3DJ

Study participating centre
Broomfield Hospital
United Kingdom
CM1 7ET

Study participating centre
Chelmsford and Essex Centre
United Kingdom
CM2 0QH

Study participating centre
Cheltenham General Hospital
United Kingdom
GL53 7AN

Study participating centre
City Hospital
United Kingdom
B18 7QH

Study participating centre

Essex County Hospital
United Kingdom
CO3 3NB

Study participating centre
Forth Valley Royal Hospital
United Kingdom
FK5 4WR

Study participating centre
Frenchay Hospital
United Kingdom
BS16 1QR

Study participating centre
Frimley Park Hospital
United Kingdom
GU16 7UJ

Study participating centre
Good Hope Hospital
United Kingdom
B75 7RR

Study participating centre
Grantham and District Hospital
United Kingdom
NG31 8DG

Study participating centre
Leeds General Infirmary
United Kingdom
LS1 3EX

Study participating centre

Peterborough City Hospital
United Kingdom
PE3 9GZ

Study participating centre
Princess Royal University Hospital
United Kingdom
TF1 6TF

Study participating centre
Royal United Hospital
United Kingdom
BA1 3NG

Study participating centre
Southport and Formby District General Hospital
United Kingdom
PR8 6PN

Study participating centre
St James's University Hospital
United Kingdom
LS9 7TF

Study participating centre
St Margaret's Hospital
United Kingdom
CM16 6TN

Study participating centre
The Queen Elizabeth Hospital
United Kingdom
B15 2TH

Study participating centre

University Hospital
United Kingdom
CV2 2DX

Study participating centre
Wishaw General Hospital
United Kingdom
ML2 0DP

Study participating centre
Wythenshawe Hospital
United Kingdom
M23 9LT

Sponsor information

Organisation
University Hospital Birmingham NHS Foundation Trust (UK)

ROR
https://ror.org/014ja3n03

Funder(s)

Funder type
Industry

Funder Name
Cancer Research UK

Alternative Name(s)
CR_UK, Cancer Research UK - London, Cancer Research UK (CRUK), CRUK

Funding Body Type
Private sector organisation

Funding Body Subtype
Other non-profit organizations

Location

United Kingdom

Funder Name
Pfizer UK - educational grant

Alternative Name(s)
Pfizer Ltd, Pfizer Limited

Funding Body Type
Private sector organisation

Funding Body Subtype
For-profit companies (industry)

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated and/or analysed during the current study will be included in the subsequent results publication.

IPD sharing plan summary
Other

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Abstract results		15/02/2016	02/03/2022	No	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes
Plain English results			15/09/2022	No	Yes