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An international study looking at the treatment of cancer of the penis that has spread to inguinal or pelvic lymph nodes

Submission date 05/06/2017	**Recruitment status** No longer recruiting	[_] Prospectively registered [_] Protocol
Registration date 13/09/2017	**Overall study status** Ongoing	[_] Statistical analysis plan [_] Results
Last Edited 12/06/2026	**Condition category** Cancer	[_] Individual participant data [X] Record updated in last year

Plain English summary of protocol
https://www.cancerresearchuk.org/about-cancer/find-a-clinical-trial/a-study-looking-at-treatment-of-cancer-of-the-penis-that-has-spread-to-the-lymph-nodes-inpact

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Type(s)
Public

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Additional identifiers

ClinicalTrials.gov (NCT)
NCT02305654

Clinical Trials Information System (CTIS)
2015-001199-23

Integrated Research Application System (IRAS)
168344

Central Portfolio Management System (CPMS)
32594

Study information

Scientific Title
InPACT - International Penile Advanced Cancer Trial (International Rare Cancer Initiative)

Acronym
InPACT

Study objectives
The aim of the study is to examine the combination and sequence of four treatments for men with locally advanced penis cancer. The study will assess whether ILND surgery after neoadjuvant chemotherapy or chemoradiotherapy is better than surgery alone, and whether there is any added benefit from removing the pelvic lymph nodes or not.

Ethics approval required
Old ethics approval format

Ethics approval(s)
London Riverside ethics committee, 17/10/2016, ref: 16/LO/1355

Primary study design
Interventional

Study design
Randomised; Interventional; Design type: Treatment, Drug, Radiotherapy, Surgery

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Penis cancer

Interventions
Patients will receive up to 4 treatments in different sequences. Randomisation process: Sequential randomisation by minimisation.

Treatment 1: Inguinal lymph node dissection (ILND)
Methodology: Standard of care surgery performed utilizing open approach
Total duration of treatment: 1 day

Treatment 2: Chemotherapy
Methodology: neoadjuvant chemotherapy before surgery (ILND)
Generic drug name: Paclitaxel, Ifosfamide, Cisplatin (TIP)
The dosage given: Paclitaxel 175 mg/m²/cycle, Ifosfamide 3600 mg/m²/cycle, Cisplatin 75 mg/m²

/cycle
Method of administration: Intravenous infusion
Frequency of administration: The inpatient regimen of TIP is administered over 3 days repeated in 21-day cycles. The outpatient regimen is administered over 5 days repeated in 21-day cycles
Total duration of treatment: 12 weeks (4 21-day cycles)

Treatment 3: Chemoradiotherapy
Methodology: neoadjuvant chemoradiotherapy before surgery (ILND) OR adjuvant chemoradiotherapy after pelvic lymph node dissection
Generic drug name: Cisplatin
The dosage given: Concurrent cisplatin at 40 mg/m² weekly
Radiotherapy in the neoadjuvant setting: the radiotherapy dose is 45Gy in 25 fractions over 5 weeks using 6-10 MV photons to all regions.
Radiotherapy in the adjuvant setting:
Groin: One or both groins may be boosted up to 54Gy in 25 fractions. An IMRT boost of up to 57 Gy can be given to recurrent or residual macroscopic tumour
Pelvis: An IMRT boost of up to 54Gy in 25 fractions is applied to:
1. Any macroscopic tumour or pathological lymph nodes
2. Electively to external iliac nodes in patient with high disease burden
Method of administration: Concurrent cisplatin is given via intravenous infusion. Radiotherapy is to be delivered with either a forward planned IMRT technique or inverse planned IMRT, performed using the local treatment planning system. Rotational arc therapies are permitted (Rapid Arc™, VMAT™ and Tomotherapy™).
Frequency of administration: Concurrent cisplatin is given once a week, radiotherapy is given 5 days a week
Total duration of treatment: 5 weeks

Treatment 4: Pelvic lymph node dissection
Methodology: prophylactic pelvic lymph node dissection perforemed utilizing open, laparoscopic or robot-assisted laparoscopic approaches
Total duration of treatment: 1 day

Follow-up: All patients will undergo clinical review in accordance with the guidelines of the European Association of Urology (EAU), namely every 3 months for years 1 and 2, then every 6 months for years 3, 4 and 5, from the start of their treatment

Intervention Type
Mixed

Primary outcome(s)
Survival time, defined in whole days as the time from the date of randomisation to the date of death from any cause; for those who have not been reported as dead at the time of analysis, the survival time will be censored at the date of last follow-up.

Key secondary outcome(s)
Secondary outcome measures for all patients:
1. Disease-specific survival time, defined in whole days as the time from the date of randomisation to the date of death specifically from penis cancer; for those who have not been reported as dead at the time of analysis, the survival time will be censored at the date of last follow-up and for those whose death is reported as non-disease specific then the survival time will be censored at date of death

2. Disease-free survival time (DFS), defined in whole days as the time from date of randomisation to the date of either locoregional recurrence, distant metastasis or death from penis cancer, whichever occurs first; for those who have not been reported as experiencing any of these events, the DFS time will be censored at the date last known to be alive and free of disease or date of non-disease-specific death. A supplementary exploratory outcome measure will also be calculated taking date of penectomy as the origin rather than date of randomisation. A subsidiary outcome measure will be locoregional recurrence free survival time (LRFST) which is defined in whole days as the time from date of randomisation to the date of locoregional recurrence; for those who have not been reported with this event, the LRFST will be censored at the date last known to be alive and free of disease
3. A subsidiary outcome measure will be distant metastases free survival time (DMFST), defined in whole days as the time from date of randomisation to the date of distant metastasis or death from disease, whichever occurs first; for those who have not been reported as experiencing either of these events, the DMFST will be censored at the date last known to be alive and free of distant metastasis or date of non-disease-specific death. A supplementary exploratory outcome measure will also be calculated taking date of penectomy as the origin for all these outcome measures rather than date of randomisation
4. Toxicity; all events experienced by patients are recorded and graded using CTCAE Version 4 criteria and specifically the occurrence of at least one grade 3 or 4 event
5. Occurrence of surgical complications, recorded as whether or not a surgical complication was experienced according to the Modifed Clavien-Dindo Classification criteria
6. Feasibility of pathological nodal assessment after chemotherapy, recorded as whether or not it was possible to achieve a pathological nodal assessment after chemotherapy
7. Quality of life (in participating patients), measured using the EORTC-QLQC30 and Lymphodema-QL on 8 occasions: prior to randomisation, 3-monthly during year 1, 6-monthly during year 2, and at the end of year 3

Secondary outcome measures measured for all trial patients in InPACT-neoadjuvant:
1. Occurrence of pathological complete remission, defined as an absolute absence of disease on histological examination in accordance with the Royal College of Pathologists' guidelines
2. Operability, recorded as whether or not the planned inguinal node dissection was undertaken and the reasons if it did not occur
3. Feasibility of on-schedule delivery of neoadjuvant therapy

Secondary outcome measures for all trial patients in InPACT-pelvis:
1. Occurrence of lower limb/scrotal oedema, recorded as whether or not the patient experiences a lower limb or scrotal oedema according to CTCAE Version 4 criteria

Completion date
30/11/2027

Eligibility

Key inclusion criteria
1. Male, aged 18 years or older
2. Histologically-proven squamous cell carcinoma of the penis
3. Stage:
3.1. Any T, N1 (i.e. a palpable mobile unilateral inguinal lymph node), M0 or
3.2. Any T, N2 (i.e. palpable mobile multiple or bilateral inguinal lymph nodes), M0 or
3.3. Any T, N3 (i.e. fixed inguinal nodal mass or any pelvic lymphadenopathy), M0
4. Measurable disease as determined by RECIST (version 1.1) criteria

5. Performance Status ECOG 0, 1 or 2
6. Patient is fit to receive the randomisation options for which he is being considered
7. Haematology/biochemistry (as dictated by local hospital practice) should indicate fitness for randomisation options and parameters should be in line with considerations specified in the summary of product characteristics. Haematological parameters should not be supported by transfusion to enable entry into the trial. Liver function and renal function tests must form part of the pre-treatment assessment for patients who may be randomised to receive TIP chemotherapy e.g. patients with impaired renal function may not be considered for arms B and C of InPACT-neoadjuvant but may be considered for arm A
8. Willing and able to comply with follow-up schedule
9. Written informed consent

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
18 Years

Upper age limit
100 Years

Sex
Male

Total final enrolment
191

Key exclusion criteria
Patients who have any of the following are not eligible:
1. Pure verrucous carcinoma of the penis
2. Non-squamous malignancy of the penis
3. Squamous carcinoma of the urethra
4. Stage M1
5. Previous chemotherapy or chemoradiotherapy outside of the InPACT trial
6. Concurrent malignancy (other than SCC or Basal Cell Carcinoma of non-penile skin) that has required surgical or non-surgical treatment in the last 3 years
7. Patients who are sexually active and unwilling to use effective contraception (if they are not already surgically sterile)

Date of first enrolment
15/05/2017

Date of final enrolment
31/05/2025

Locations

Countries of recruitment
United Kingdom

England

Wales

Study participating centre
St George’s Hospital
Blackshaw Road
London
England
SW17 0QT

Study participating centre
The Royal Marsden Hospital
Downs Road
Sutton
England
SM2 5PT

Study participating centre
Leicester General Hospital
Gwendolen Road
Leicester
England
LE5 4PW

Study participating centre
Norfolk and Norwich University Hospital
Colney Lane
Colney
Norwich
England
NR4 7UY

Study participating centre
Velindre Hospital
Velindre Road

Cardiff
Wales
CF14 2TL

Study participating centre
Morriston Hospital
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Cwmrhydyceirw
Swansea
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SA6 6NL

Sponsor information

Organisation
Institute of Cancer Research

ROR
https://ror.org/043jzw605

Funder(s)

Funder type
Charity

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

Results and Publications

Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are/will be available upon request from inpact-icrctsu@icr.ac.uk.

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
HRA research summary			28/06/2023	No	No
Other publications		01/06/2019	10/05/2022	Yes	No
Other publications		01/04/2025	13/05/2025	Yes	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes