

# Study with intensity modulated radiation therapy with cisplatin to treat stage I-IVA cervical cancer

<b>Submission date</b> 02/04/2012	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 27/04/2012	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 17/01/2020	<b>Condition category</b> Cancer	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Cervical cancer is a leading cause of death by cancer in women. Despite the successes of screening and vaccination, a large proportion of women don't take preventative steps and are diagnosed with locally advanced stages of cancer. Concurrent chemotherapy and radiation therapy (RT) is the standard treatment for patients in addition to standard cisplatin-based chemotherapy. When patients received this combination treatment, there are side effects and sometimes the cancer returns. Therefore, strategies to reduce the side effects and allow treatment intensification are needed. Conventional pelvic RT results in a box-shaped radiation dose to the pelvis that covers both tumor tissues and normal tissues. Intensity modulated radiation therapy (IMRT) is a modern RT technique that differs from conventional techniques in many ways. First, patients undergo computed tomography (CT) simulation so that customized radiation doses can be delivered. IMRT treatment planning involves multiple beam angles and uses computerized treatment planning to reduce radiation to surrounding normal tissues. This would be the first international study to test IMRT for both postoperative and definitive treatment of cervical cancer.

### Who can participate?

Patients with cervical cancer (invasive squamous cell carcinoma, adenocarcinoma, or adenosquamous carcinoma) will be enrolled in the study.

### What does the study involve?

After signing an informed consent form, patients will receive radiation therapy daily (Monday to Friday) for 5 to 5½ weeks. Once a week on study days 1, 8, 15, 22, and 29 patients will also receive intravenous infusions of cisplatin prior to radiation therapy. In addition, once a week some evaluations and tests will be done. After chemotherapy and radiation is complete patients will be followed up at the following times: 1 week, 2 weeks, 1, 2, 4, 8, 12, 18, 24, 30, and 36 months. The assessments at these visits will be part of the patients routine care for their cancer and will include a physical examination, review of side effects, testing and a quality of life evaluation.

What are the possible benefits and risks of participating?

Standard treatment for cervical cancer may involve risks and discomforts. Patients will be at risk for side effects whether or not you choose to participate in this study. There may also be other side effects that we cannot predict. Medicines and other treatments can be given to make the side effects less serious and uncomfortable. Many side effects go away shortly, but in some cases, side effects may be serious, long-lasting, and may even cause death.

Patients participating in this study may receive a direct medical benefit. IMRT reduces radiation doses to normal organs and tissues, which previous studies have indicated may reduce side effects compared to standard radiation therapy. However, the benefits of IMRT are unknown. Others may also benefit from the information learned from this research study.

Where is the study run from?

The University of California, San Diego Moores Cancer Center is coordinating the study between approximately 14 countries and 25 sites.

When is the study starting and how long is it expected to run for?

Patient enrollment started in September 2011 and is expected to continue until December 2014.

Who is funding the study?

United States of America National Institute of Health and University of California, San Diego Moores Cancer Center

Who is the main contact?

Meaghan Stirn  
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## Contact information

### Type(s)

Scientific

### Contact name

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### Contact details

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## Additional identifiers

ClinicalTrials.gov (NCT)

NCT01554397

Protocol serial number

## Study information

### Scientific Title

Phase II/III clinical trial of intensity modulated radiation therapy with concurrent cisplatin for stage I-IVA cervical carcinoma

### Study objectives

Compared to conventional RT techniques, IMRT will reduce acute hematologic and gastrointestinal toxicity for cervical cancer patients treated with concurrent cisplatin

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

University of California, San Diego Human Research Protection Program, 08 August 2011, ref: 110808

### Primary study design

Interventional

### Study design

Randomised phase II/III trial

### Study type(s)

Treatment

### Health condition(s) or problem(s) studied

Biopsy-proven, invasive squamous cell carcinoma, adenocarcinoma, or adenosquamous carcinoma of the cervix

### Interventions

Phase II Open Label (1 Arm) Expected Enrollment = 91 Patients

Cisplatin 40 mg/m<sup>2</sup> given weekly (for 5 weeks starting day 1) over 60 minutes IMRT, 45.0 (intact) or 50.4 Gy (postoperative high-risk) in 1.8 Gy daily fractions over 5-5.5 weeks

Optional: Intracavitary Brachytherapy for Postoperative Patients

Follow-up: patients will followed up every 4 months for a year, then every 6 months for 2 years (total 36 months)

Phase III Expected Enrollment = 334 Patients

1. Arm A:

Cisplatin 40 mg/m<sup>2</sup> given weekly (for 5 weeks starting day 1) over 60 minutes

IMRT, 45.0 (intact) or 50.4 Gy (postoperative high-risk) in 1.8 Gy daily fractions over 5-5.5 weeks

Optional: Intracavitary Brachytherapy for Postoperative Patients

Follow-up: patients will followed up every 4 months for a year, then every 6 months for 2 years (total 36 months)

2. Arm B:

Cisplatin 40 mg/m<sup>2</sup> Weeks 1-5

Conventional RT, 45.0 (intact) or 50.4 Gy (postoperative high-risk) in 1.8 Gy daily fractions over 5-5.5 weeks

Optional: Intracavitary Brachytherapy for Postoperative Patients

Follow-up: patients will be followed up every 4 months for a year, then every 6 months for 2 years (total 36 months)

## **Intervention Type**

Other

## **Phase**

Phase II/III

## **Primary outcome(s)**

To test whether IMRT will reduce the rate of acute grade  $\geq 3$  hematologic or clinically significant grade  $\geq 2$  gastrointestinal toxicity compared to conventional RT techniques for cervical cancer patients treated with concurrent cisplatin

## **Key secondary outcome(s)**

1. To estimate and compare the probability of acute and late adverse events
2. To estimate and compare efficacy of cisplatin/IMRT in terms of locoregional failure, disease-specific survival, disease-free survival, and overall survival

## **Completion date**

12/01/2017

# **Eligibility**

## **Key inclusion criteria**

1. Biopsy-proven, invasive squamous cell carcinoma, adenocarcinoma, or adenosquamous carcinoma of the cervix
2. Biopsy result positive for carcinoma within 60 days prior to registration
3. FIGO clinical stage I-IVA disease, based on standard diagnostic workup, including: History /physical examination and/or Examination under anesthesia (if indicated)
4. If the patient is status post hysterectomy, one or more of the following conditions must be present: positive lymph nodes, positive margins, parametrial invasion, or non-radical surgery (i.e., simple hysterectomy).
5. If the patient is inoperable, one or more of the following conditions must be present: clinical stage IB2-IVA, positive lymph nodes on nodal sampling or frozen section, and/or parametrial invasion
6. Within 42 days prior to registration, the patient must have any of the following, if clinically indicated: examination under anesthesia, cystoscopy, sigmoidoscopy, rigid proctoscopy, or colonoscopy.
7. X-ray (PA and lateral), CT scan, or PET/CT scan of the chest within 42 days prior to registration;
8. CT scan, MRI, or PET/CT of the pelvis within 42 days prior to registration
9. Karnofsky Performance Status 60-100
- 10.1. Absolute neutrophil count (ANC)  $\geq 1500$  cells/mm<sup>3</sup>
- 10.2. Platelets  $\geq 100,000$  cells/mm<sup>3</sup>
- 10.3. Hemoglobin  $\geq 10.0$  g/dl (Note: The use of transfusion or other intervention to achieve Hgb  $\geq 10.0$  g/dl is acceptable)
- 10.4. Creatinine clearance  $\geq 50$  mg/dl
- 10.5. Bilirubin  $< 1.5$  mg/dl

10.6. WBC  $\geq$  3,000/ $\mu$ l

10.7. ALT/AST  $<$  3 x ULN

10.8. INR  $\leq$  1.5

11. Negative serum pregnancy test for women of child-bearing potential

### **Participant type(s)**

Patient

### **Healthy volunteers allowed**

No

### **Age group**

Adult

### **Sex**

All

### **Key exclusion criteria**

1. Prior invasive malignancy (except non-melanomatous skin cancer), unless disease free for a minimum of 3 years
2. Prior systemic chemotherapy within the past three years
3. Prior radiotherapy to the pelvis or abdomen that would result in overlap of radiation therapy fields;
4. Para-aortic, inguinal, or gross (unresected) pelvic nodal metastasis. Gross pelvic nodal metastasis is defined as either: Radiographic evidence of nodal metastasis on CT or MRI (node having short axis diameter  $>$  1 cm)OR Radiographic evidence of nodal metastasis on diagnostic FDG-PET or PET/CT scan (abnormally increased FDG uptake as determined and documented by the radiologist)OR Biopsy-proven metastasis (e.g. needle biopsy) in undissected node
5. Distant metastasis
6. Unstable angina and/or congestive heart failure requiring hospitalization within the past 6 months
7. Hepatic insufficiency resulting in clinical jaundice and/or coagulation defects
8. Uncontrolled diabetes, defined as diabetes mellitus, which in the opinion of any of the patient's physicians requires an immediate change in management
9. Uncompensated heart disease or uncontrolled high blood pressure
10. Acquired Immune Deficiency Syndrome (AIDS) based upon current CDC definition

### **Date of first enrolment**

09/01/2011

### **Date of final enrolment**

12/01/2017

## **Locations**

### **Countries of recruitment**

United Kingdom

Brazil

Canada

China

Czech Republic

India

Korea, South

Taiwan

Thailand

Türkiye

United States of America

**Study participating centre**

**University of California**

La Jolla

United States of America

92093-0698

## **Sponsor information**

**Organisation**

University of California, San Diego

**ROR**

<https://ror.org/0168r3w48>

## **Funder(s)**

**Funder type**

Government

**Funder Name**

National Institutes of Health

**Alternative Name(s)**

US National Institutes of Health, Institutos Nacionales de la Salud, NIH, USNIH

## Funding Body Type

Government organisation

## Funding Body Subtype

National government

## Location

United States of America

# Results and Publications

## Individual participant data (IPD) sharing plan

### IPD sharing plan summary

#### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	phase II results	01/03/2017	11/04/2019	Yes	No
<a href="#">Study website</a>	Study website	11/11/2025	11/11/2025	No	Yes