



UTSW Pre-Clinical Radiation Core Facility

Overview of Services

Pre-clinical radiation research in cell or small animal models is essential for understanding the biological effects of radiation or other modalities used in combination with radiation before considering human clinical trials. Unfortunately, many investigators do not have the training in radiation physics and radiobiology to conduct this research properly, which often results in experimental results that cannot be reproduced by other scientists. The U.S. Food and Drug Administration, the National Cancer Institute, and many prominent research journals have raised concerns that pre-clinical radiation research often calculates radiation doses inaccurately and calibrates irradiation devices improperly. Furthermore, many pre-clinical research facilities have not kept pace with the technologies currently used in clinical radiation therapy, which limits the clinical relevance of their research findings. To address these limitations in pre-clinical radiation research, the Cancer Prevention and Research Institute of Texas (CPRIT) has provided funding to develop a Preclinical Radiation Core Facility (PCRCF). The PCRCF will provide CPRIT-funded and other investigators throughout Texas access to state-of-the-art radiation and imaging technologies, as well as the expertise needed to perform accurate, clinically relevant cancer therapy research. The PCRCF will organize, consolidate, and administer existing resources at UT Southwestern under a single banner. Available resources will include not only irradiators and imaging technologies, but also cell and animal models that have been developed for use in experiments involving radiation.

Investigators will be given proper training on PCRCF devices. Medical physicists will ensure that machines are calibrated properly and that radiation doses are calculated accurately. In addition to a complete description of the dosimetry plan for their experiments, investigators will be provided with the proper language for publication.

The objective of the PCRCF is to ensure that pre-clinical radiation experiments are performed correctly and their results are communicated clearly and accurately.

Leadership

Michael Story | Core Director

UTSouthwestern
Medical Center

Sign in using [UTSW](#) credentials

or

Sign in using [iLab](#) credentials

or

Sign in using [other institution](#) credentials ⓘ

Please contact PCRCF

[Learn more about iLab Operations Software](#)

Contacts

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To reserve time on an equipment

About Our Core

Schedule Equipment

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Schedule Resources

Timeline View

**Please note: You must be trained on the equipment before you can schedule. If you need training, please submit a training request and the core will contact you.*

To reserve time on equipment:

1. Click on the "modality" button below for the equipment of interest to View Schedule
2. Click and drag the desired time frame for your reservation
3. Fill out Reservation Details page
4. If your reservation requires approval, you will be notified when your reservation is approved or if it needs to be reschedule

For radiation delivery only

▶ [Radiation Delivery \(3\)](#)

▶ [Isoflurane kit used during radiation treatment \(1\)](#)

▶ [Isoflurane kit used during cell implantation \(1\)](#)

▶ [Radiation Delivery Service with Image guidance \(3\)](#)

▶ [Optical Imaging \(1\)](#)

▶ [Magnetic Resonance Imaging \(MRI\) \(1\)](#)

▶ [Metabolic Analyzer \(1\)](#)

Three irradiators are available across the campus. Please select the one you like to use.

▼ Radiation Delivery (3)		
X-Rad320 in NG2.310 description pricing	View Schedule	
XRad-320 in K1.406 description pricing	View Schedule	
XRad-320 in NB3.406 description pricing	View Schedule	

For users who like to use the image-guided radiation delivery

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▶ [Radiation Delivery \(3\)](#)

▶ [Isoflurane kit used during radiation treatment \(1\)](#)

▶ [Isoflurane kit used during cell implantation \(1\)](#)

▶ [Radiation Delivery Service with Image guidance \(3\)](#)

▶ [Optical Imaging \(1\)](#)

▶ [Magnetic Resonance Imaging \(MRI\) \(1\)](#)

▶ [Metabolic Analyzer \(1\)](#)

For radiation delivery with image guidance

Three irradiators with imaging capability are available across the campus. Please select the one you like to use.

▼ Radiation Delivery Service with Image guidance (3)		
SARRP-Xstrahl in NB3.206 description pricing	View Schedule	
X-Rad 225Cx in NE3.200 description pricing	View Schedule	
Xrad320 NG2.310 with the Imaging Panel description pricing	View Schedule	

Scheduling the optical imaging device

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▶ [Isoflurane kit used during cell implantation \(1\)](#)

▶ [Radiation Delivery Service with Image guidance \(3\)](#)

▶ [Optical Imaging \(1\)](#)

▶ [Magnetic Resonance Imaging \(MRI\) \(1\)](#)

▶ [Metabolic Analyzer \(1\)](#)

For optical imaging

Click on the imager to schedule time.

▼ [Optical Imaging \(1\)](#)

[AMI-HTX in NB3.200](#) [description](#) [pricing](#)

[View Schedule](#)



Scheduling the MRI

Schedule Resources

Timeline View

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- ▶ [Radiation Delivery \(3\)](#)
- ▶ [Isoflurane kit used during radiation treatment \(1\)](#)
- ▶ [Isoflurane kit used during cell implantation \(1\)](#)
- ▶ [Radiation Delivery Service with Image guidance \(3\)](#)
- ▶ [Optical Imaging \(1\)](#)
- ▶ [Magnetic Resonance Imaging \(MRI\) \(1\)](#)
- ▶ [Metabolic Analyzer \(1\)](#)

For MRI imaging

Click on the MRI imager to schedule time.

▼ [Magnetic Resonance Imaging \(MRI\) \(1\)](#)

[MRS-3017 in NB3.206](#) [description](#) [pricing](#)

[View Schedule](#)



Scheduling the Metabolic Flux Analyzer

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▶ [Radiation Delivery \(3\)](#)

▶ [Isoflurane kit used during radiation treatment \(1\)](#)

▶ [Isoflurane kit used during cell implantation \(1\)](#)

▶ [Radiation Delivery Service with Image guidance \(3\)](#)

▶ [Optical Imaging \(1\)](#)

▶ [Magnetic Resonance Imaging \(MRI\) \(1\)](#)

▶ [Metabolic Analyzer \(1\)](#)

For Metabolic Analyzer

Click on the analyzer name to schedule time.

▼ [Metabolic Analyzer \(1\)](#)

[Seahorse Flux Analyzer XF 24 in NC7.122](#) [description](#) [pricing](#)

[View Schedule](#)



To reserve time on an equipment

Calendar name shown in the circle

UTSW Pre-Clinical Radiation Core Facility > View Schedule

X-Rad320 in NG2.310    Confirm Usage

Week (7 Days)   < Sun, 03 Jan - Sat, 09 Jan 2021 > Central Time (US & Canada) Linked Calendar Calendar Details

	Sun, 03 Jan	Mon, 04 Jan	Tue, 05 Jan	Wed, 06 Jan	Thu, 07 Jan	Fri, 08 Jan	Sat, 09 Jan
07:00 AM							
08:00 AM							
09:00 AM							
10:00 AM							
11:00 AM							
12:00 PM							
01:00 PM							
02:00 PM							
03:00 PM							
04:00 PM							
05:00 PM							

Move the cursor to the desired starting time, then click and hold the left mouse button and drag to the ending time.



General

Comments

Contacts

Reservation details **!** Unsaved reservation - click save reservation

For: X-Rad320 in NG2.310 - Self Use \$50.00/hr (Trained) - My Reservation

Lab: [iLab Test \(Testing\) Lab](#)

Created on: January 09, 2021 19:18

Event Notes:

APN#1234567

note visible to anyone



Write your APN# here

Required forms

There are no forms required to make this reservation.

Times

	Start	End	
Scheduled	Jan 09 2021 07:45 PM	Jan 09 2021 08:45 PM	

This event can be modified or deleted before 07:45 PM CST on Jan 08, 2021

Reserve time on a linked schedule

Reserve

Use and cost of reservation

Duration	Effective Rate	Amount	Use Type
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Save Reservation

Cancel Changes

Delete Reservation

✕

General | Comments | Contacts

Reservation details ⚠ **Unsaved reservation - click save reservation**

For: X-Rad320 in NG2.310 - Self Use \$50.00/hr (Trained) - My Reservation
Lab: [iLab Test \(Testing\) Lab](#)
Created on: January 09, 2021 19:18

Event Notes: note visible to anyone ⓘ

Times

	Start	End	
Scheduled	Jan 09 2021 07:45 PM	Jan 09 2021 08:45 PM	

This event can be modified or deleted before 07:45 PM CST on Jan 08, 2021

Reserve time on a linked schedule

Reserve
 Isoflurane Unit #1 (Isostation 1) in NG2.310 - Isoflurane Unit #1 (Isostation 1) in NG2.310 Self Use \$15.00/hr (Trained) ✔

Use and cost of reservation



For all irradiation, check 'Reserve'.



General

Comments

Contacts

Reservation details ! **Unsaved reservation - click save reservation**

For: X-Rad320 in NG2.310 - Self Use \$50.00/hr (Trained) - My Reservation

Lab: [iLab Test \(Testing\) Lab](#)

Created on: January 09, 2021 19:18

Event Notes:

APN#1234567

note visible to anyone



Required forms

There are no forms required to make this reservation.

Times

	Start	End	
Scheduled	Jan 09 2021 07:45 PM	Jan 09 2021 08:45 PM	

This event can be modified or deleted before
07:45 PM CST on Jan 08, 2021

Reserve time on a linked schedule

- Reserve
- Isoflurane Unit #1 (Isostation 1) in NG2.310 - Isoflurane Unit #1 (Isostation 1) in NG2.310 Self Use \$15.00/hr (Trained) ✓

Use and cost of reservation



For tumor irradiation user only: check both boxes

Select the payment chartfield following the instructions on Slide #23

Payment information

Please select the payment method: ⓘ

Please select ▼

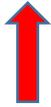
Use the same payment information for all add-on charges

Invite additional people to this event by email ⓘ

 Save Reservation

 Cancel Changes

 Delete Reservation



Finally click 'Save Reservation' above.

X-Rad320 in NG2.310  

Week (7 Days)   < Sun, 03 Jan - Sat, 09 Jan 2021 > Central Time (US & Canada) Linked Calendar Calendar Details

	Sun, 03 Jan	Mon, 04 Jan	Tue, 05 Jan	Wed, 06 Jan	Thu, 07 Jan	Fri, 08 Jan	Sat, 09 Jan
09:00 AM							
10:00 AM							
11:00 AM							
12:00 PM							
01:00 PM							
02:00 PM							
03:00 PM							
04:00 PM							
05:00 PM							
06:00 PM							
07:00 PM							
08:00 PM							
09:00 PM							

07:45 PM - 08:45 PM
Landon Researcher

For tumor irradiation, click 'Linked Calendar' to check the second schedule.

The screenshot displays the Agilent CrossLab iLab Operations Software interface. The header includes the Agilent CrossLab logo, the text 'iLab Operations Software', a search bar, and user information for 'Landon Researcher'. The main content area shows the 'View Schedule' for 'X-Rad320 in NG2.310'. The calendar view is set for 'Sun, 03 Jan - Sat, 09 Jan 2021' in Central Time. A 'Linked Calendar' button is highlighted with a red arrow. A red circle highlights a scheduled event on Friday, Jan 8th, from 07:45 PM to 08:45 PM, assigned to 'Landon Researcher'.

	Sun, 03 Jan	Mon, 04 Jan	Tue, 05 Jan	Wed, 06 Jan	Thu, 07 Jan	Fri, 08 Jan	Sat, 09 Jan
10:00 AM							
11:00 AM							
12:00 PM							
01:00 PM							
02:00 PM							
03:00 PM							
04:00 PM							
05:00 PM							
06:00 PM							
07:00 PM							
08:00 PM							

For tumor irradiation, user should see the linked schedules.



About Our Core

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To initiate a Service Request:

1. Click the **Request Service** button next to the service of interest.
2. Complete and save the **Custom form** and other required information.
3. Click **Submit request to core**.
4. Core facility staff will be in touch with you upon review.

When requesting a project, you must select 'Save' or 'Cancel' to exit the page.

Consultation Request

Please initiate this request to set up a consultation to discuss your project with our facility staff.

request service

\$50.00 (Internal)

Training Request

If you are needing training, please submit this training request and staff will be in contact.

request service

Small animal models

Preclinical animal models are typically immunocompetent or immunocompromised mice or rats. Irradiation endpoints may include normal tissue responses such as lung fibrosis, mucositis, skin lesions (desquamation or hair loss), or bone marrow depletion. Tumor models include the use of subcutaneously implanted human tumors in immune compromised mice or rats, surgically implanted human tumor cells and PDXs in the tissue of origin of immune-compromised animals, syngeneic tumors implanted subcutaneously or orthotopically in immune-competent mouse or rats. Other animal models include Drosophila, Medaka and Zebrafish

request service

\$50.00 (Internal)

Large animal models

Large animal irradiation requires the use of linear accelerators ordinarily used for human patients. A miniature pig model has been routinely irradiated to examine radiation neurotoxicity and methods of sparing. These animals are also excellent models for studying skin response and other normal tissue endpoints including radiation protection (Gottingen minipig).

request service



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Consultation Request

Request Name:

Customer: Landon Researcher Lab: iLab Test (Testing) Lab

Email: landon.researcher@ilabx.com Phone: 111-1111

Forms and Request Details

(see bottom of list to add items to this request)

View Form: Consultation Request

Not Started



Complete questions below, click **save completed form** button, then scroll down to click **submit request to core** at the bottom of the page.

* **Required fields.**

Please list any any impending deadlines (consultation, grant application, grant deadline, etc.) related to your project:

service request contents



Save Progress

★ Provide preferred availability:

Jan 10, 2021 19:26



Please save your form!

save completed form

save draft of form



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⚠ After saving your form, please submit your request to the core.

▶ Jan 09 07:24 PM	Consultation Fee Services	Quantity: <input type="text" value="1.0"/>	Unit Price: \$50.00	Total: \$50.00	Billing Status: Not Ready To Bill	Work Status: Proposed	
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[+ add service](#)

⚠ Please fill out any forms that are highlighted in red.

Cost

The core will review and update this projected cost. You will only be billed for completed work.

Total Projected Cost: \$

Payment Information

Please enter the po number.

You will have the opportunity to review the quote before being billed. ⓘ

Please select ▼



enter additional payment information

Select the payment chartfield following the instructions on Slide #23

submit request to core

save draft request

Cancel



Instruction for providing payment information

- Your PI will need to provide you access to the chart field for your project.

Go into iLabs

Request Services

- After you select your service, the next section will be an overview of what you have requested.
- The Payment Information is in the next section.
 - Under Chartfield segments, you will need to click on the down arrow to select your chartfield information.



▼ Payment Information

Actual cost:

Customer agreed to cost:

Chartfield Segments:

Default Chartfield Segment:

- - If you do not see your chartfield, save your form and contact your PI to give you access.
- Under Default Chartfield segments, you can have a chartfield setup as a default by your PI.



▼ Payment Information

Actual cost:

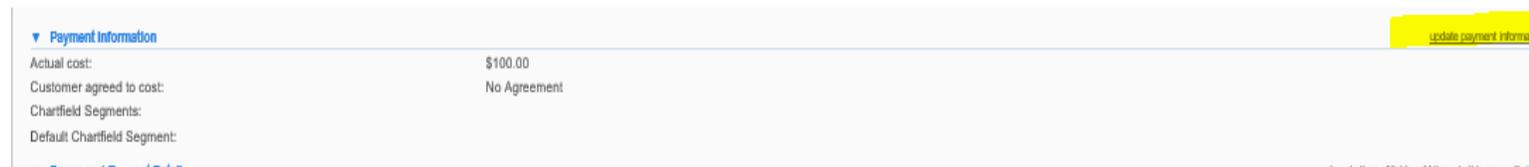
Customer agreed to cost:

Chartfield Segments:

Default Chartfield Segment:

If you do not know which chartfield to use, you can save your form and come back to edit prior to submitting your form to the Core.

- Open your form up in iLabs.
 - Click Update Payment Information



▼ Payment Information

Actual cost: \$100.00

Customer agreed to cost: No Agreement

Chartfield Segments:

Default Chartfield Segment:

update payment information

- Then hit SUBMIT to submit your request to the CORE.