Regulated Research Institutional/Industrial Setting Form (1C)

This form must be completed AFTER experimentation by the adult supervising the student research conducted in a regulated research institution, industrial setting or any work site other than home, school or field.

Student's Name(s) Alice Z. Chen

Title of Project Longitudinal MRI-based Radiomics: Estimating Rectal Cancer Response to Chemoradiation

To be completed by the Supervising Adult in the Setting (NOT the Student(s)) after experimentation:
(Responses must be on the form as it is required to be displayed at student's project booth; please do not print double-sided.)

The student(s) conducted research at my work site:

1. Did you or your proxy (e.g. graduate student, postdoc, employee) mentor or provide substantial guidance to the student researcher? ☑ Yes ☐ No
    a. If no, describe your and/or your institution's role with the student researcher and his/her project (e.g. supervised use of equipment on site without ongoing mentorship and sign below.

    b. If yes, complete questions 2 –5.

2. Is the student's research project a subset of your ongoing research or work? ☑ Yes ☐ No
    Use questions 3, 4 and 5 to detail how the student's project was similar and/or different from ongoing research or work at your site.

3. Describe the independence and creativity with which the student:
    a. developed the hypotheses or engineering goals for the research project

    Alice conducted literature reviews and a background knowledge study with my instruction before joining the lab. She came up with a rough idea and created a research plan after some discussion with me.

    b. designed the methodology for his/her research project

    The goal of this project is to correlate MRI imaging biomarkers with clinical endpoints. Alice decided to use radiomic tools based on the quality and size of our existing MRI data to accomplish this task.

    c. analyzed and interpreted data

(Continued on next page)

Student's Name(s) Alice Z. Chen

4. Detail the student's role in conducting the research (e.g. data collection, specific procedures performed). Differentiate what the student observed and what the student actually did.

Alice conducted literature review and background knowledge studies with my instruction before joining the lab. She came up with an approximate idea and created a research plan after some research discussions with me and one of my senior lab members. She was in charge of the entire data processing work, including rigid image registration between MRI images acquired at different time points throughout the radiation therapy for each individual patient, and feature extraction and selection using Pyradiomics, a python toolbox and Matlab. She also performed feature validation using Matlab. Alice is an extremely hard working individual and she is highly independent for a junior high school student. It was my great pleasure working with her.

5. Did the student(s) work on the project as part of a group?   ☑ Yes   ☐ No
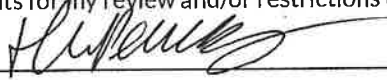   If yes, how many individuals were in the group and who were they (e.g. high school students, graduate students, faculty, professional researchers)?

There are two students directly involved in this project including Alice under my supervision. The other students is a 5th year PHD candidate whose main responsibility was image acquisition and data preparation including anonymization.

I attest that the student has conducted the work as indicated above and that any required review and approval by institutional regulatory board (IRB/IACUC/IBC) has been obtained. Copies are attached if applicable.
I further acknowledge that the student will be presenting this work publicly in competition and I have communicated with the student research regarding any requirements for my review and/or restrictions of what is publicized.

Peng Hu	*(signature)*	Associate Professor
Supervising Adult's Printed Name	Signature	Title
University of California, Los Angeles		12/21/19
Institution		Date Signed (must be after experi-mentation) (mm/dd/yy)
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