

**PET “Metabolic Flare” Scheduling Instructions
(also see flow chart on page 2)**

PET estradiol stimulation testing is performed to see if a patient’s breast cancer has active functional estrogen receptors and may benefit from hormonal therapy. Prior to scheduling confirm that the patient has disease that is likely to be detectable by FDG-PET imaging.

The patient will have a baseline FDG-PET/CT study per standard clinical procedures. On the following day or another day in the near future (within a week), the patient will be scheduled to return for the “flare” FDG-PET/CT. Scheduling should be done so that all imaging parameters can remain as consistent as possible (same time of day to ensure similar fasting times, uptake time, etc.). Patient will be given a prescription for 3 estradiol 2 mg tablets (total of 6 mg) by the treating physician. The patient will be instructed to take one 2 mg tablet every 8 hours with the last dose of estradiol occurring approximately 1 hour before the scheduled injection of FDG. Possible schedules are:

Take 1 tablet at:			Appointment Time	FDG Injection Time
2:30 pm	10:30 pm	6:30 am	7:00 am	7:30 am
3:00 pm	11:00 pm	7:00 am	7:30 am	8:00 am
3:30 pm	11:30 pm	7:30 am	8:00 am	8:30 am
4:00 pm	12:00 am	8:00 am	8:30 am	9:00 am
4:30 pm	12:30 am	8:30 am	9:00 am	9:30 am
5:00 pm	1:00 am	9:00 am	9:30 am	10:00 am
5:30 pm	1:30 am	9:30 am	10:00 am	10:30 am
2:00 pm	2:30 am	10:00 am	10:30 am	11:00 am
8:00 pm	4:00 am	12:00 pm	11:00 am	1:00 pm
8:30 pm	4:30 am	12:30 pm	1:00 pm	1:30 pm
9:00 pm	5:00 am	1:00 pm	1:30 pm	2:00 pm

Be sure to schedule based on patient’s normal sleeping habits and/or confirm that the patient will be compliant and set an alarm clock to wake up at odd hours of the night or early morning to stay on the 8-hour dosing schedule.

Flow Chart for PET flare study

Call from oncologist (his/her office) to the reading room



Nuclear Medicine attending should talk to the oncologist and make sure that based on the available data the lesions will be evaluable by FDG-PET/CT and then ask the oncologist to give estradiol prescription to the patient (2 mg estradiol x 3)



Nuclear Medicine attending/fellow will schedule the study with PET technologists and Cheryl/Clara (make sure that the first and second PET studies can be done at the same time of the day with approximately 60 min uptake time)



Then the Nuclear Medicine attending/fellow tentatively selects the times for the patient to take estradiol



Nuclear Medicine attending/fellow informs the Dr.'s office and makes sure that the time is convenient for the patient and then confirms the appointment with Cheryl/Clara



Nuclear Medicine attending/fellow should fill out the estradiol form and discuss it with the patient after the first PET study is done and gives her the instructions



There should be one report for each PET study. The lesions to be analyzed are selected on the first day PET study (typically up to 6 most intense lesions). The SUVmax of the lesion(s) is measured on both PET studies. The average SUVmax of the lesions on each day will be calculated and the percent change in FDG uptake will be determined. $\geq 12\%$ increase in FDG uptake on the second day PET in comparison to the first day PET is indicative of "metabolic flare" and thus, the likelihood of response to hormonal therapy

Call Dr. Dehdashti (362-7027) with any questions

“ESTRADIOL CHALLENGE” PET Scan

Patient Name:

DOB:

Instructions for taking of estradiol prior to “estradiol challenge” PET scan:

1. To determine if you have active estrogen receptors, you will need to take a total of 6 mg of estradiol (an oral form of estrogen) before your second PET scan.

2. You will take one (2-mg) pill three times according to schedule below.

- Take first tablet at _____ on _____

- Take second tablet at _____ on _____

- Take third tablet at _____ on _____

3. Your PET Flare scan is scheduled for _____ on _____

REMEMBER: Nothing to eat for at least 6 hours prior to your appointment. You may drink as much water as you would like before the appointment. Please report to the Clinical PET Facility located on the second floor of the Center for Advanced Medicine Building approximately 30 minutes before your scheduled appointment