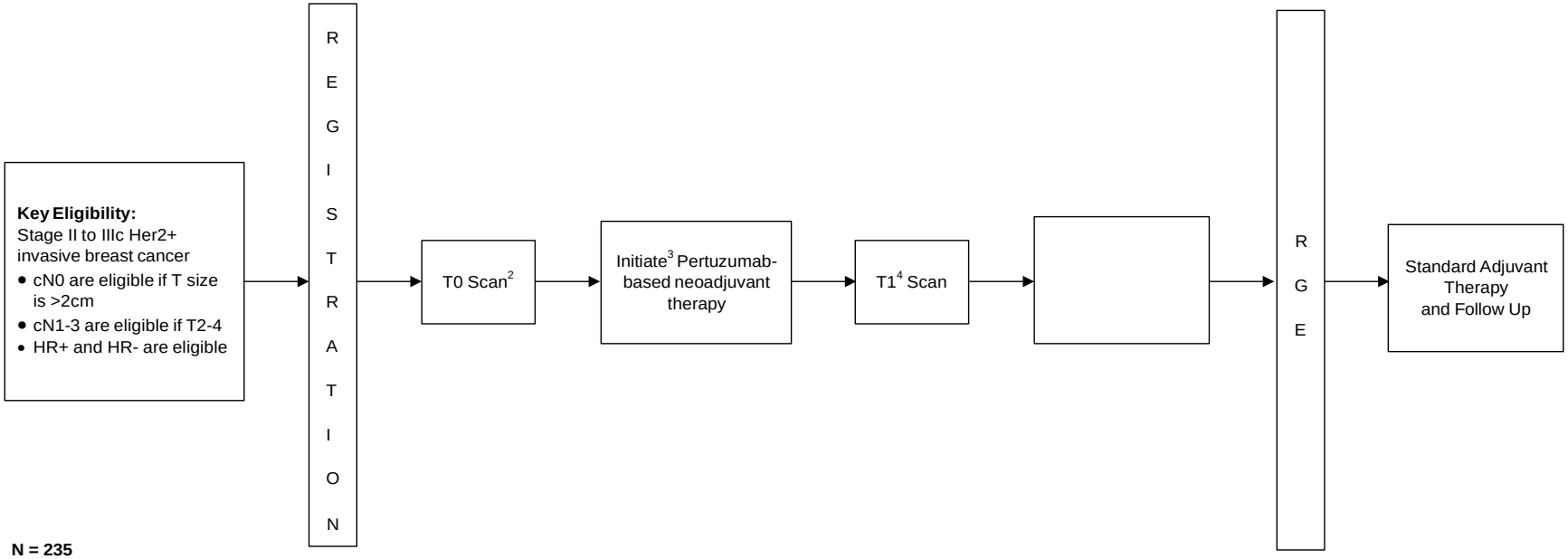
## Schema




1. Screening tests outlined in Section 7.1 must be completed within 28 days prior to registration.
2. Some patients may have a qualifying PET scan completed prior to registration, see Section 7. Neoadjuvant therapy should begin after study registration and completion of T0.
3. Neoadjuvant therapy should start within 21 days after the T0 scan is completed. Therapy can include Docetaxel or Paclitaxel, Herceptin, Pertuzumab (or biosimilars) (THP) x 12 weeks (every three weeks for 4 cycles) OR Docetaxel, Carboplatin, Herceptin, Pertuzumab (or biosimilars) (TCHP) x 18 weeks (every three weeks for 6 cycles). See Section 5.3.
4. T1 scan to be completed on Day 15 (+7 days) of Cycle 1, should be completed prior to start of treatment on Cycle 2 Day 1 and should be completed on same scanner as T0.
5. Follow-up will be a minimum of three years or maximum of 5 years from patient registration. See the study parameters table for frequency.

## 3. Selection of Patients

Each of the criteria in the checklist that follows must be met for a patient to be considered eligible for this study. Use the checklist to confirm a patient's eligibility. For each patient, this checklist must be photocopied, completed and maintained in the patient's chart.

**In calculating days of tests and measurements, the day a test or measurement is done is considered Day 0. Therefore, if a test is done on a Monday, the Monday four weeks later would be considered Day 28.**

ECOG-ACRIN Patient No. _____

Patient's Initials (L, F, M) _

Physician Signature and Date _____

**NOTE:** CTEP Policy does not allow for the issuance of waivers to any protocol specified criteria (http://ctep.cancer.gov/protocolDevelopment/policies_deviations.htm). Therefore, all eligibility criteria listed in Section 3 must be met, without exception. The registration of individuals who do not meet all criteria listed in Section 3 can result in the participant being censored from the analysis of the study, and the citation of a major protocol violation during an audit, and require reporting to the IRB of record as non-compliance.

All questions regarding clarification of eligibility criteria must be directed to the Group's Executive Officer (EA.ExecOfficer@jimmy.harvard.edu) or the Group's Regulatory Officer (EA.RegOfficer@jimmy.harvard.edu).

**NOTE:** Institutions may use the eligibility checklist as source documentation if it has been reviewed, signed, and dated prior to registration by the treating physician.

### 3.1 Eligibility Criteria

_____ 3.1.1 Patients (all genders) must be ≥ 18 years of age.

_____ 3.1.2 Patient must have the ability to understand and the willingness to sign a written informed consent document.

_____ 3.1.3 Patient must have an ECOG Performance Status of 0-2.

_____ 3.1.4 Patient must have histologically confirmed HER2-positive primary invasive breast carcinoma by ASCO/CAP guidelines that has been determined by local testing.

_____ 3.1.5 Patient must have known (either positive or negative) hormone receptor (ER or PR) status by local testing, per ASCO/CAP guidelines. Patients with either hormone receptor–positive or hormone receptor-negative HER2-positive breast cancer are eligible.

_____ 3.1.6 Patient must have AJCC 8th Edition Stage IIa-IIIc according to anatomic staging table at diagnosis and below criteria.

- Patients without nodal involvement (cN0) are eligible if T size >2.0 cm (T2-4)
- Patients with nodal involvement (cN1-3) are eligible if T2-4

- Patients with clinical T4d are not eligible

_____ 3.1.7 Patients with bilateral invasive breast cancers are eligible if both cancers are HER2-positive (as defined in 3.1.4) and at least one meets all protocol eligibility criteria and neither cancer renders the patient ineligible (i.e., per eligibility 3.1.11.)

_____ 3.1.8 Patients with multiple ipsilateral invasive tumors are eligible as long as all tumors are HER2-positive and at least one tumor focus meets all eligibility criteria. Multiple lesions that appear part of the same index tumor do not require additional biopsy/HER2 testing.

_____ 3.1.9 Patient must not have any prior treatment for the current breast cancer, including surgery, chemotherapy, hormonal therapy, radiation or experimental therapy.

_____ 3.1.10 Patient must plan to start a standard neoadjuvant pertuzumab (or other biosimilars) based regimen (refer to Section 5.3 for regimen details).

_____ 3.1.11 Patients with a prior or concurrent malignancy whose natural history or treatment does not have the potential to interfere with the safety or efficacy assessment of this imaging intervention are eligible for this trial.

_____ 3.1.12 Patients with human immunodeficiency virus (HIV) on effective anti-retroviral therapy with undetectable viral load within 6 months of registration are eligible for this trial.

_____3.1.13 Patient must not be pregnant or breast-feeding due to the potential harm to an unborn fetus and possible risk for adverse events in nursing infants with the teratogenic effects of FDG in addition to the radiation exposure during PET/CT.

All patients of childbearing potential must have a blood test or urine study within 7 days prior to registration to rule out pregnancy.

**NOTE:** A pregnancy test within 7 days prior to the T0 scan is also required but will only need to be done if a) the T0 scan is completed after study registration and b) if the pregnancy test done prior to registration is completed outside of the 7-day window.

A patient of childbearing potential is defined as anyone, regardless of sexual orientation or whether they have undergone tubal ligation, who meets the following criteria: 1) has achieved menarche at some point, 2) has not undergone a hysterectomy or bilateral oophorectomy; or 3) has not been naturally postmenopausal (amenorrhea following cancer therapy does not rule out childbearing potential) for at least 24 consecutive months (i.e., has had menses at any time in the preceding 24 consecutive months).

Patient of childbearing potential?_____(Yes or No)

Date of blood test or urine study: _____

_____ 3.1.14 Patient must not have any contraindication to FDG-PET/CT imaging which includes routine glucose values > 200 mg/dL and severe claustrophobia.

_____ 3.1.15 Patient must be participating in the trial at an institution which has agreed to perform the imaging research studies, completed the ECOG-ACRIN defined PET/CT scanner qualification procedures and received ECOG-ACRIN PET/CT scanner approval as outlined in Section 7.2.

3.1.15.1 For patients who completed the baseline (T0) FDG-PET/CT PRIOR to registration, neoadjuvant pertuzumab-based regimen must start after study registration and within 21 days after the T0 scan.

- Patients must not have used colony stimulating growth factors within 14 days prior to completing a T0 scan done prior to registration

_____ _____

Physician Signature Date

**OPTIONAL:** This signature line is provided for use by institutions wishing to use the eligibility checklist as source documentation.