Appendix 1

Adult solid meal gastric emptying scintigraphy protocol

Based on Thailand adult solid meal gastric emptying scintigraphy protocol and SNM Procedure Guideline for Adult Solid-Meal Gastric-Emptying Study 3.0

**Meal preparation** (Thailand adult solid meal gastric emptying scintigraphy protocol)
1. Mix 500 mCi of 99mTc-phytate with whole egg (size 65-70 g), 10 ml of vegetable oil and 10 ml of water.
2. Cook the mixtures in the microwave for 2 minutes.
3. The meal can be eaten with 100 g of rice and 100 ml of water.
4. The time required for eating the meal should be less than 10 minutes.

**Patient preparation**
1. The patient should take nothing by mouth within 6 hours before initiation of the study.
2. The patient should be advised to avoid smoking the day before the study.

**Image acquisition** (SNM Procedure Guideline for Adult Solid-Meal Gastric-Emptying Study 3.0)
1. The patients are in supine position.
2. Images are obtained by Philips Skylight gamma camera using low-energy high-resolution collimator. A 128x128 word-mode image matrix is used. The photopeak settings are 20% at the 140-keV peak for 99mTc.
3. Anterior and posterior planar images including distal esophagus, stomach and proximal small bowel in field of view will be obtained for 1 minute immediately after meal ingestion.
4. The repeated image in the same projection for 1 minute will be obtained at hourly interval (60, 120, 180 and 240 minute).

**Processing**
1. All data will be processed by Philip-Jetstream workspace.
2. The radioactive decay must be corrected.
3. A region of interest (ROI) is drawn around the tracer activity in the stomach. A time-activity curve and fit curve will be displayed.
4. Gastric emptying half time (T1/2) and percent meal retention at 120 minutes will be calculated.

Appendix 2

**GI symptom scores**

Severity scale will be graded from 0 to 3.
- Grade 3: symptoms significantly interfere with daily activities
- Grade 2: moderate bothersome
- Grade 1: mild or little bothersome
- Grade 0: no symptoms

Frequency scale will be graded from 0 to 3.
- Grade 3: nearly continuous symptoms, daily
- Grade 2: several times a week
- Grade 1: once a week
- Grade 0: no symptoms