STANDARDIZED PROCEDURE
LIVER BIOPSY (Adult, Peds)

These procedures are intended to describe procedures performed by Nurse Practitioners and/or Certified Nurse Midwives (depending on the clinical privileges granted to the individual practitioner) *at UC San Diego Health.*

I. Definition

The purpose of this procedure is to allow the Advanced Health Practitioner (AHP) to safely obtain tissue for histological review in order to assess the etiology and/or severity of liver disease.

II. Background Information

Setting:

The setting (inpatient vs outpatient) and population (adults vs pediatrics) for the Advanced Health Practitioner (AHP) is determined by the approval of the privileges requested on the AHP Privilege Request Form. If the procedure is being done on a Pediatric patient, make sure Child Life is involved and use age appropriate language and age appropriate developmental needs with care of children, as appropriate to the situation.

Supervision:

The necessity of the procedure will be determined by the AHP in verbal collaboration with the attending physician or his/her designee. Direct supervision will not be necessary once competency is determined, as provided for in this procedure. At that time, general or indirect supervision is acceptable.

Designee is defined as another attending physician who works directly with the supervising physician and is authorized to supervise the AHP.

The Advanced Health Practitioner will notify the physician immediately upon being involved in any emergency or resuscitative events or under the following circumstances:

I. Patient decompensation or intolerance to the procedure
II. Bleeding that is not resolved
III. Outcome of the procedure other than expected

Indications

1. Chronic liver disease of unknown etiology.
2. Staging of patient with chronic liver disease including viral hepatitis (HCV, HBV).
3. Follow-up of patients with chronic viral hepatitis (to assess progression of disease and response to therapy)

Precautions/Contraindications

Absolute Contraindications:

1. Coagulopathy: abnormal PT/INR, PTT or platelet count less than 60,000
2. Decompensated liver disease with ascites.

Relative Contraindications:

1. Focal lesions in the liver other than simple cysts and hemangiomas.
2. Shrunken, cirrhotic liver.

III. Materials

1. Liver biopsy tray
2. Lidocaine
3. Mask, hat, sterile gown, sterile gloves
4. Skin cleansing agent

IV. Liver Biopsy

Pre-procedure evaluation/ Prior to Performing Liver Biopsy:

- Review indications for liver biopsy with MD.
- Laboratory testing: CBC, PT, PTT

Patient Preparation

- Insure patient has not used NSAIDS or aspirin in past 10 days.
- Ultrasound with radiologist on day of biopsy to mark biopsy location.

Procedure Specifics:

1. Place patient in supine position with right arm above the head and right leg crossed over left leg.
2. Confirm ultrasound mark for biopsy by percussion.
3. Draw by lidocaine (1% without epinephrine) 5-10 ml under sterile technique.
4. Prepare the biopsy area using Betadine or other skin cleansing agent in usual sterile fashion.
5. Provide local anesthesia by infiltrating skin, soft tissue to the level of the liver capsule using Lidocaine. The needle is kept parallel to the floor and slightly cephalad (towards xiphoid). The Lidocaine is injected with the patient in full exhalation and with breath held.
6. To prepare the Jamshedi needle, 2-3 ml of normal saline are drawn up into the syringe and excess air expelled. The needle is confirmed to firmly attached to the syringe.
7. A small incision (approximately 3-4 mm length) to pass the Jamashedi needle is made in the skin with sterile scalpel provided with the Sterile Liver Biopsy tray.
8. The Jamashedi needle is advanced through the incision and slowly advanced through the chest wall. Once through, the needle is pulled back slightly and patient is asked to inhale-exhale deeply and hold breath.
9. As patient breathes out, the syringe is pulled back and locked (right turn) and during held breath, needle is advanced and withdrawn in one smooth motion with dwell time less than 2 seconds.
10. The maximum numbers of passes with the Jamshedi needle is 2. If insufficient tissue, contact MD. Minimum amount of tissue required is 2 cm. If less, contact MD.

Post-procedure

- Monitoring per protocol (standardized).

- Specimen sent to pathology. Order special studies as determined by discussion with MD.
- Check CBC 4 hours post-procedure. If > 2g/dL point decrease in Hemoglobin, notify MD.

Follow-up treatment

Instruct patient and family to observe sight for signs and symptoms of infection and to call MD on-call or clinic for any unusual problems.

Termination of treatment

11. Patient does not agree to sign informed consent.
12. Patient does not consent to procedure by AHP.
13. Patient cannot tolerate the procedure emotionally and/or physically
14. Procedure contraindicated secondary to abnormal laboratories.
15. Vital signs abnormalities and/or other concerns the AHP has will be discussed thoroughly with supervising physician.

V. Documentation

Documentation is in the electronic medical record

1. Documentation of the pretreatment evaluation and any abnormal physical findings.
2. Record the time out, indication for the procedure, procedure, type and size of needle used, EBL, amount of tissue removed, the outcome, how the patient tolerated the procedure, medications (drug, dose, route, & time) given, complications, and the plan in the note, as well as any teaching and discharge instructions.

All abnormal/adverse effects are reviewed with an attending physician

VI. Competency Assessment

Initial Competence

1. The Advanced Health Practitioner will be instructed on the efficacy and the indications of this therapy and demonstrate understanding of such.
2. The Advanced Health Practitioner will demonstrate knowledge of the following:
   a. Medical indication and contraindications of liver biopsy.
   b. Risks and benefits of the procedure
   c. Related anatomy and physiology
   d. Consent process (if applicable)
   e. Steps in performing the procedure
   f. Documentation of the procedure
   g. Ability to interpret results and implications in management.
3. Advanced Health Practitioner will observe the supervising physician perform each procedure three times and perform the procedure **twenty** times under supervision.

4. Supervising physician will document Advanced Health Practitioner's competency prior to performing procedure without supervision.
5. The Advanced Health Practitioner will ensure the completion of competency sign off documents and provide a copy for filing in their personnel file and a copy to the medical staff office for their credentialing file.

Continued proficiency

6. The Advanced Health Practitioner will demonstrate competence by successful completion of the initial competency.
7. Each candidate will be initially proctored and signed off by an attending physician. Advanced Health Practitioner must perform this procedure at least **ten** times per year. In cases where this minimum is not met, the attending must again sign off the procedure for the Advanced Health Practitioner. The Advanced Health Practitioner will be signed off after demonstrating 100% accuracy in completing the procedure.
8. Demonstration of continued proficiency shall be monitored through the annual evaluation.
9. A clinical practice outcomes log is to be submitted with each renewal of credentials. It will include the number of procedures performed per year and any adverse outcomes. If an adverse outcome occurred, a copy of the procedure note will be submitted.

VII. RESPONSIBILITY

Please contact the Advanced Practice Council if you need help. The administrative assistant for the Chief Nursing Officer can direct you. Call; 619-543-3438.

VIII. HISTORY OF PROCEDURE

Revised by the Committee of Interdisciplinary Practices: 2/26/2014, 9/28/2016
Reviewed by the Medical Staff Credentials Committee: 3/5/2014, 10/6/2016
Approved by the Medical Staff Executive Committee: 3/20/2014, 10/7/2016