Teach the Teacher

Effective Methods for Teaching and Troubleshooting Techniques of Fine Needle Aspiration Procurement

Presenter: Dr. Elham Khanafshar

University of California San Francisco

Elham.Khanafshar@ucsf.edu

No Conflict of Interest

Objectives

- Learn successful methods for teaching FNA procurement techniques.

Version 2 Cytopathology Milestones, ACGME Report Worksheet

Patient Care 3: Performance of Fine Needle Aspirations				
Level 1	Level 2	Level 3	Level 4	Level 5
Recognizes indications for fine needle aspirations; properly identifies patient and describes the anatomy of the area Describes potential adverse patient events of various superficial fine needle aspiration procedures	Performs a simple fine needle aspiration with appropriate patient consent and time-out with assistance (actual or simulated) Describes potential adverse events for specific clinical scenarios	Independently performs a simple fine needle aspiration; performs a complex fine needle aspiration with assistance Manages adverse patient events, with assistance (actual or simulated)	Independently performs a complex fine needle aspiration Independently manages adverse patient events (actual or simulated)	Teaches/consults in the performance of fine needle aspirations
☐	☐	☐	☐	☐ ☐ ☐ ☐ ☐
Comments:				Not Yet Completed Level 1 ☐ Not Yet Rotated ☐

UCSF Health

Palpation-Guided Fine Needle Aspiration

Step 1; Observation

- Live or video

  Resources:

  - Palpation Guided FNA – Dr Ljung Fine Needle Aspiration Biopsy (FNA) Techniques
    - https://youtu.be/LW0KE9toGq4
  - Fine Needle Aspiration Biopsy (FNA) Techniques – Dr Ljung Smear Preparation and flip technique
    - https://www.youtube.com/watch?v=CjwqwDRP7OY
    - https://www.youtube.com/watch?v=wAfy_Jx7H-0

NPR Hidden Brain Podcast

There is a gap between perception and reality
when it comes to learning

NPR Host; Shankar Vedantam Feb 18, 2019

Limitations of Observation

Easier SEEN than DONE:

Merely watching others perform can foster an illusion of skill acquisition.

Kardas M. O'Briane Psychological Science 2018 Vol. 29(4) 521-536

The Moon Walk

Exposure:

Low - 1 view

High - 20 views

Rating:

1 – pretty bad

10 – pretty good

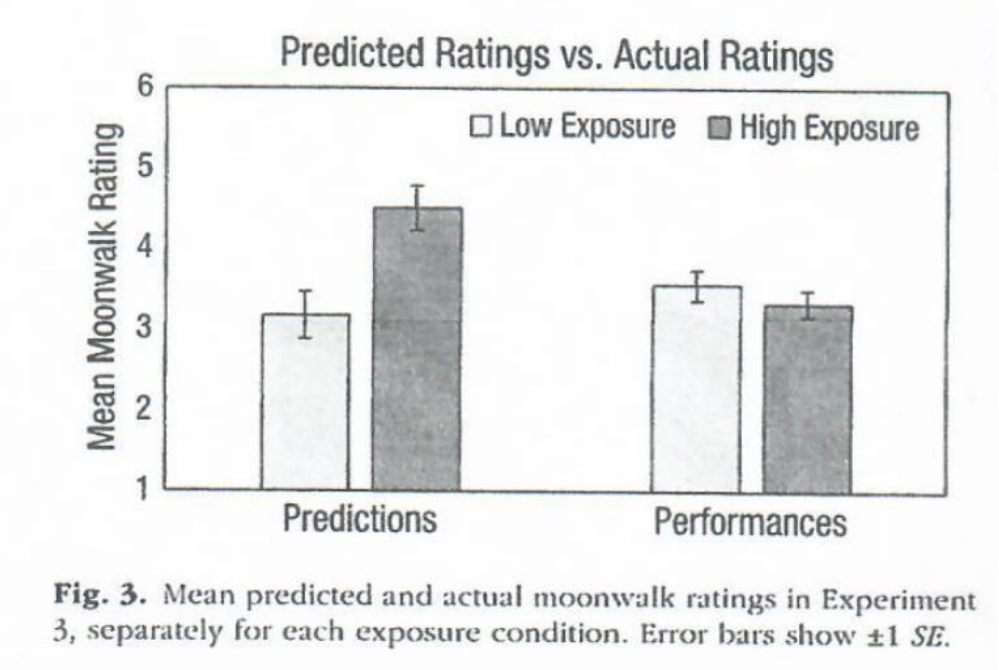


Fig. 3. Mean predicted and actual moonwalk ratings in Experiment 3, separately for each exposure condition. Error bars show ±1 *SE*.

Low-exposure participants accurately imagined the quality of their low-exposure moonwalks and high-exposure participants significantly overestimated the quality of their high-exposure moonwalks. Repeated observation inflated people's perceived ability.

Ref. Kardas M. and O'Brien E. Easier Seen than Done: Merely watching Others Perform Can Foster an Illusion of Skill Acquisition Psychological Science 2018, Col 29(4)521-536

UCSF Health

Step 2

- Practice – simulated setting

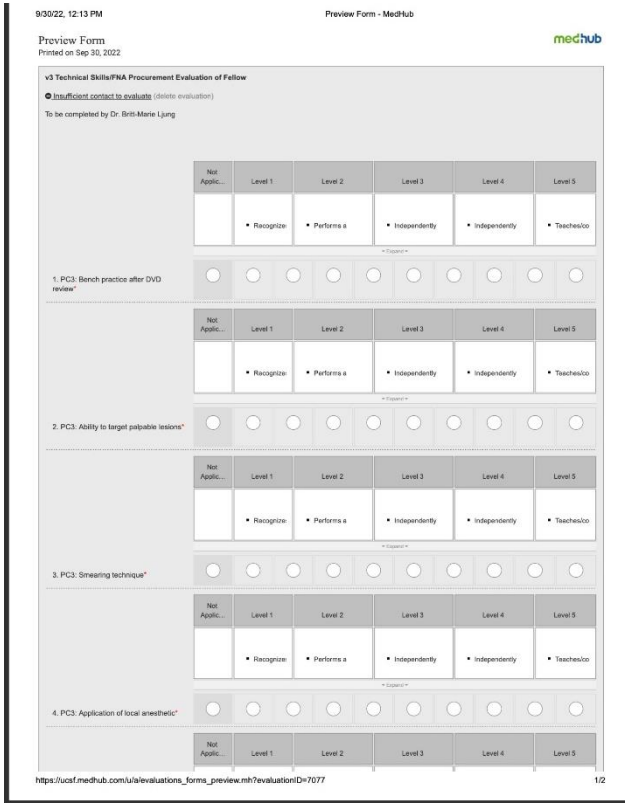
Examples:

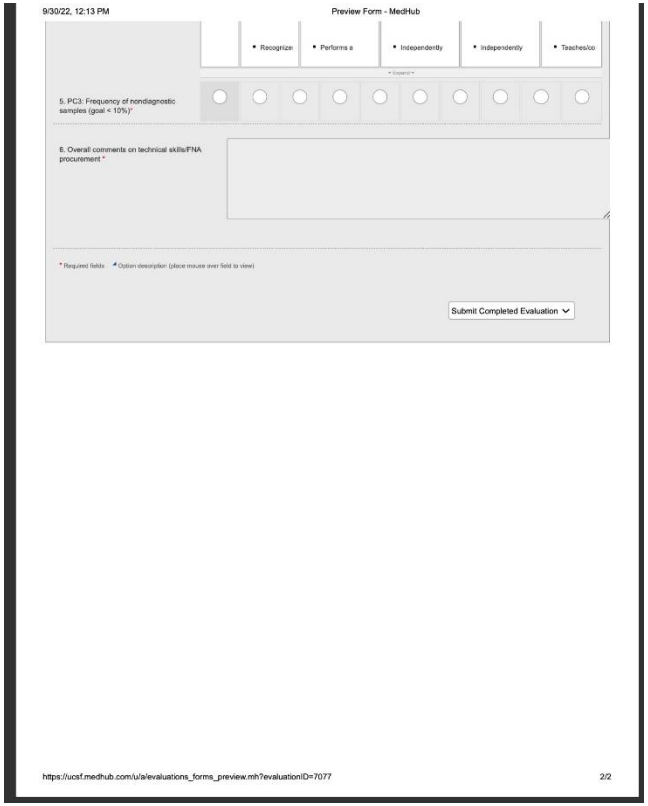
- Needle placement within target with positive forward motion
  - External focus
    - What the needle is doing - facilitates automaticity (placement of the needle in 3 dimensions, range and carving)
  - Internal focus
    - hand, arm, body position etc. (muscle memory)
- Smearing technique
  - Perfect oval
  - Flip technique
  - Concentrating a bloody specimen
- Cell block
  - Needle wash
  - Fat pad biopsy
- Highlight the good practice!

- Bench vs. reality

Step 3

- EVALUATION of skill and feedback
- Repeat steps 2 and 3 until optimal





UCSF Health

Step 4

- Practice live on patients with supervision and feedback

Step 5

- Independence → Mastery
- ROSE
  - Immediate feedback on specimen quality
  - Potential opportunity to reinforce optimal procurement or opportunity refine

UCSF Health

Ultrasound-Guided Fine Needle Aspiration

Steps

- Ultrasound machine functions
- Practice normal anatomy
- US phantom practice, parallel and vertical approach, and indication of each
- Reading recommendation: Ultrasound Features of Superficial and Palpable Lesions by Drs. Cynthia Benedict and Susan Rollins published by CAP
- Radiology didactic sessions for cytopathology fellows (i.e. lymph node, salivary gland, thyroid)
- Elective Ultrasound rotation

Boot Camp for New Cytopathology Fellows

- Two weeks starting on July 1st
  - Safety and infection control
  - Develop a rapport
  - Consenting (potential adverse events in general and specific scenario and treatment)
  - Time out
  - FNA procurement
    - Palpation-Guided FNA
    - US-Guided FNA
  - After visit summary (E/M)
  - Patient discharge instruction
  - Patient Evaluation

Head and Neck Ultrasound Elective Rotation Goals and Objectives

Head and Neck Ultrasound Elective (Two-Weeks)
Department of Pathology/Division of Cytopathology - UCSF

On this elective, the fellow will participate in the examination of head and neck organs and diagnosis of disease under ultrasound imaging under supervision of Dr. Liina Poder and other UCSF radiologists.

Competency Based Goals and Objectives

1) **Patient care** **(see specific objectives below)**
   - Perform thyroid ultrasound examination and be able to explain the findings and come up with a TI-RADS score for thyroid nodules
   - Perform ultrasound examination of salivary gland lesions and be able to describe the findings and correlate with pathology
   - Perform ultrasound examination of head and neck lymph nodes and identify and explain abnormal findings
   - Participate in ultrasound-guided procedures such as fine-needle aspiration and core biopsy

2) **Medical Knowledge** **(see specific objectives below)**
   - Understand the basic principles and explain the physical properties of the ultrasound
   - Identify various head and neck organs and their normal ultrasound characteristics
   - Describe normal ultrasound anatomy of various head and neck organs and the ultrasound characteristics of important pathologies
   - Scan thyroid and head and neck lesions using appropriate instrument

3) **Practice based learning and improvement**
   - Evaluate their diagnostic and consultative practices and improve their practices in patient care.

4) **Interpersonal and communication skills**
   - Communicate effectively with other health care professionals, including ultrasonographers, radiologists, and trainees outside of the Pathology Department.

5) **Professionalism**
   - Demonstrate a commitment to fulfilling their professional responsibilities, adhering to ethical principles, interacting with other health care providers in a professional manner, and showing sensitivity to a diverse patient population.

6) **Systems-based practice**
   - Demonstrate an awareness and responsiveness to the larger context and health care system.

UCSF Health

UNIT NUMBER

PT. NAME

BIRTHDATE

LOCATION DATE

AUTHORIZATION FOR SURGERY, SPECIAL DIAGNOSTIC OR THERAPEUTIC PROCEDURE, BLOOD TRANSFUSION AND ADMINISTRATION OF ANESTHETICS (Page 1 of 2)

1. I authorize _____, M.D., and associates to perform the following operation(s) or procedure(s): _____

   _____

   I understand that UCSF Medical Center is a teaching institution and that associates or assistants involved in the operation(s) or procedure(s) may include residents, fellows, medical students or other allied healthcare professionals. I authorize that such associates or assistants may perform or observe portions of the operation(s) or procedure(s) under the direction of the physician(s) identified in paragraph 1 above. That physician may be out of the operating or procedural room for some of the surgical tasks done by the associates and assistants if the physician(s) identified in paragraph 1 determines it is safe to do so.

2. I authorize the administration of anesthesia and/or sedation as may be considered necessary or advisable. I have been advised that there are certain risks associated with anesthetics that may include allergic reactions, and/or drug intolerances, and dental, mouth or throat damage, discomfort or soreness. I understand that the explanations that I have received may not be exhaustive or all-inclusive and that other more remote risks may be involved.

3. I authorize the use of pathology and radiology services if necessary. I understand that any tissue removed will be disposed of at the discretion of the hospital pathologist or designee. I authorize the pathologist to retain, preserve, use or dispose of any tissues, organs, bones, bodily fluid or medical devices that may be removed during the operation(s) or procedure(s). I understand that such specimens may be used for research, as permitted by federal and state law. I understand that I have no property ownership or interest in such specimens or data derived from these specimens and no right or entitlement in any research or research project using or derived from the specimens.

   STOP

   My tissue:

   ☐ **may be used in medical research**

   ☐ **may not be used in medical research**

4. The nature and purpose of the procedure or operation, the likelihood of benefits, risks, complications and side effects of the procedure or operation and its alternatives, possible alternative methods of treatment (including the risks related to not receiving the operation or procedure) and potential problems that might occur during recuperation have been explained to me by Doctor _____. My consent is given with the understanding that any operation or procedure involves risks and hazards some of which can be serious and possibly fatal. I understand that risks may vary depending on the operation or procedure for which I am consenting. I am aware that the practice of medicine and surgery is not an exact science and no guarantee has been made as to the results or cure. I understand that the explanations that I have received may not be exhaustive or all-inclusive and that other more remote risks may be involved.

500-0160A (Rev. 01/19) ORIGINAL - MEDICAL RECORD COPY YELLOW - SHADOW CHART COPY PINK - PATIENT COPY

AUTHORIZATION FOR SURGERY OR SPECIAL DIAGNOSTIC OR THERAPEUTIC PROCEDURE (Page 1 of 2)

UCSF Health

UNIT NUMBER

PT. NAME

BIRTHDATE

LOCATION DATE

AUTHORIZATION FOR SURGERY, SPECIAL DIAGNOSTIC OR THERAPEUTIC PROCEDURE, BLOOD TRANSFUSION AND ADMINISTRATION OF ANESTHETICS (Page 2 of 2)

5. Transfusion: (strike out if not applicable); My doctor has discussed with me that there is a reasonable possibility that a transfusion of blood or blood products may be necessary. I have received a copy of the transfusion information form describing my transfusion options (unless I have a life-threatening emergency or medical contraindications). My doctor has discussed the risks, benefits and alternatives of the transfusion of blood and blood products with me. I have also learned about the option of pre-donating my own blood and have had the opportunity to discuss this matter with my doctor.

   The patient ☐ has ☐ has not been given the information form based on medical indications

   _____ (physician signature)

   STOP

   By signing this consent form:

   ☐ **I DO** ☐ **DO NOT** (check one) consent to the transfusion of blood or blood products, as my doctor may order, in connection with the operation(s) or procedure(s) discussed in this form.

6. I understand that I have the right to refuse any proposed operation or procedure any time before it is performed. During surgery, additional procedures which are in addition to, or different from those set forth in paragraph 1 may be carried out as considered necessary for my well-being by my physician or surgeon for conditions not known at the time the operation or procedure commenced.

7. I understand that there may be a health care industry representative or other visitors present, with the approval of UCSF, during my operation or procedure for purposes of medical observation or to provide technical support.

8. I acknowledge that I have the right to be informed if my physician has any economic interest related to the performance of the operation(s) or procedure(s) beyond compensation for the surgery or procedure performed.

9. In the event of an accidental exposure to my blood or bodily fluids to a physician, contractor or employee of the facility, I consent to testing for HIV, Hepatitis or other bloodborne pathogens.

10. I have had full opportunity to ask questions concerning my condition, the authorized procedure(s) and/or surgery(s), the alternatives, and the risks and consequences associated with it. All the questions I have asked have been answered.

My signature is my acknowledgement that I have read, understood, and agreed to the above, that I have received all the information I desire regarding the operation/procedure, and that I specifically agree to the performance of the operation or procedure.

Date _____ Time _____ M. Patient's Signature: _____

☐ Patient is a minor and patient's parent / conservator / guardian (circle one) signed.

☐ Patient is incompetent and patient's conservator / guardian (circle one) signed.

☐ Patient is unable to sign because _____

STOP

Consent obtained in: ☐ English ☐ Spanish ☐ Cantonese ☐ Mandarin ☐ Other: _____

Source ***required:*** ☐ Certified bilingual ☐ In person ☐ Telephone ☐ Video

Interpreter Name and/or ID Number ***required*** (please print): _____

500-0160B (Rev. 03/22) ORIGINAL - MEDICAL RECORD COPY YELLOW - SHADOW CHART COPY PINK - PATIENT COPY

AUTHORIZATION FOR SURGERY OR SPECIAL DIAGNOSTIC OR THERAPEUTIC PROCEDURE (Page 2 of 2)

UCSF Medical Center

Time Out for Fine Needle Aspiration (FNA) Procedure Form

Name:

DOB/MRN:

Date of Service:

Involve patient in time-out – Use interpreter for Limited English Proficient Patients

Completed by: Cytopathologist / Cytopathology Fellow (circle one)

1. **Procedure:** Fine Needle Aspiration Biopsy

2. **Consent**
   - ☐ Consent form completed

   If Limited English Proficient Patient:
   - ☐ Interpreter present
   - ☐ Consent form in patient's primary language

3. **Time-Out**

	YES	NO		YES	NO
Correct Patient	☐	☐	Anticoagulant or Antiplatelet Medications	☐	☐
Correct Procedure	☐	☐			
Correct Site/Side	☐	☐	Implants/Special Equipment at Biopsy Site	☐	☐
History of Bleeding Disorder	☐	☐			

Comments: _____

Physician signature: _____

Print Name: _____

4. **Post-Procedure Monitoring**
   - ☐ A post-procedure monitoring plan has been ordered (See physician orders) or the unit has a post-procedure monitoring protocol in place.
   - ☐ Not applicable

This form is part of the medical record.

Evaluation Form

Printed on May 27, 2020

medhub

360 Patient Evaluation

Evaluator: [redacted]

Evaluation of:

Date:

Please select the best descriptor for this doctor

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
1. Treated me in a friendly manner*	☐	☐	☐	☐	☒	☐
2. Listened and understood my concerns*	☐	☐	☐	☐	☒	☐
3. Was thorough*	☐	☐	☐	☐	☒	☐
4. Treated me with respect*	☐	☐	☐	☐	☒	☐
5. Used words I could understand when explaining medical information*	☐	☐	☐	☐	☒	☐
6. I have confidence in this doctor*	☐	☐	☐	☐	☒	☐
7. I felt free to ask this doctor questions*	☐	☐	☐	☐	☒	☐
8. Spent an appropriate amount of time talking with me*	☐	☐	☐	☐	☒	☐

[redacted]

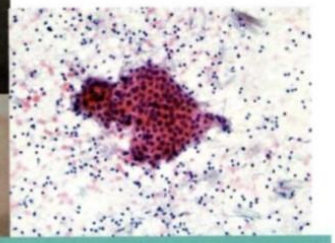
Evaluation Form - MedHub

9. I overheard this doctor talking, in public, about me*

- ☐ N/A
- ☐ Yes
- ☒ No

10. Overall Comments

good experience



Fine Needle Aspiration Clinic

Fine Needle Aspiration & Biopsy Post Procedure Instructions

- You may notice bruising or slight swelling in the biopsied area. These symptoms should resolve within 10 days.

- You may experience soreness after the procedure. Use a cold pack on the site as needed. Avoid aspirin products and NSAIDs (Ibuprofen, Advil) on the day of the biopsy unless prescribed by your physician.

- Watch for signs of infection which could include: redness, swelling, warmth or yellowish drainage from area of biopsy. Please contact your referring physician (doctor requested you obtain this procedure) or go to the nearest emergency room should you experience any of these symptoms.

- You may shower as normal. The biopsy site can be gently cleaned with soap and water.

- Avoid heavy exercise for 1-2 days. Light exercise such as walking or jogging is acceptable.

- Occasionally, additional evaluation, including another biopsy, may be required for a final diagnosis.

- Results may take 7 to 10 business days. The clinician who ordered the biopsy will receive the report once it is finalized. If you have not heard from your provider in 14 days, please call her/his office to inquire regarding results.

1825 Fourth Street,
L2190 – Second Floor
San Francisco, CA 94143
(415) 885-7301

UCSF
University of California
San Francisco

UCSF Health

UNIT NUMBER
PT. NAME
BIRTHDATE
DATE OF SERVICE

TERMS AND CONDITIONS OF SERVICE: ADMISSION, MEDICAL SERVICES, AND FINANCIAL AGREEMENT (Page 1 of 3)

1. **UCSF MEDICAL CENTER:** is part of the University of California and is comprised of its hospital(s) (UCSF Medical Center, UCSF Medical Center at Mt. Zion, and UCSF Benioff Children's Hospital), its hospital-based clinics, its Primary Care Network clinics, and the UCSF School of Medicine.
2. **MEDICAL CONSENT:** I consent to medical treatments or procedures, X-ray examinations, drawing blood for tests, medications, injections, taking of treatment related photographs, videotaping, laboratory procedures, and hospital services rendered to me under the general and special instructions of the physicians or other health care professionals assisting in my care. To facilitate my care, I consent to evaluation and examination by a physician or other health team professionals who may be physically distant from me via telehealth technologies, including but not limited to two-way video, digital images, and other telehealth technologies as determined by my providers. I also consent to my admission to the UCSF Medical Center if this is necessary for my care.
3. **TEACHING, RESEARCH AND HEALTHCARE INSTITUTION:** The University of California including UCSF Medical Center, is a teaching, research and healthcare institution. I understand that residents, interns, medical students, students of ancillary health care professions (e.g., nursing, x-ray, rehabilitation therapy), post-graduate fellows, and other trainees and visiting professors may observe, examine, treat, and participate at the request and under the supervision of the attending physician in my care as part of the University's medical education programs.

   I also understand that a University institutional review board approves projects conducted by the University researchers in accordance with state and federal law. As a result, I understand that I may be contacted and asked to participate in research studies but I am under no obligation to do so. My decision whether to participate or not will not affect my ability to obtain medical care.
4. **EDUCATION, INSTRUCTIONS, AND PATIENT CARE SURVEYS:** I understand that I may be receiving education, instructions, and surveys about my medical care and services. UCSF Medical Center uses a variety of methods and vendors for these activities and I consent to receiving this communication using those methods, including via e-mail, text message or voicemail, and from vendors, including but not limited to Oneview, EMMI, Healthwise and Healthnuts.
5. **PERSONAL VALUABLES:** UCSF Medical Center asks patients and families not to bring valuable items into its facilities. UCSF Medical Center shall not be liable for the loss of or damage to any money, documents, jewelry, glasses, dentures, furs, cell phones, electronic devices or other articles of unusual value and shall not be liable for loss or damage to any personal property, unless deposited in the fireproof safe maintained by UCSF. The liability for loss of any personal property shall be no more than $500.
6. **RELEASE OF MEDICAL INFORMATION:** The State of California Information Practices Act requires UCSF Medical Center to provide the following information to individuals who supply information about themselves. As a patient of UCSF Medical Center, I will be asked to submit certain personal information, such as my address and phone number, Social Security number, insurance information, medical history and treatment. The principal purpose for requesting this information is to ensure accurate identification, continuity of medical care, and payment for such care. Under federal and state laws and regulations, UCSF Medical Center is authorized to maintain this information. As required by UCSF Medical Center, furnishing all information requested is mandatory unless otherwise noted. I understand that failure to provide such information may affect my medical care and/or insurance benefits and coverage.

   UCSF Medical Center will obtain my written authorization to release information about my medical treatment, except in those circumstances when UCSF Medical Center is permitted or required by law to release information

500-0513A (Rev. 08/19) MEDICAL RECORD COPY GENERAL WITH FINANCIAL AGREEMENT

TERMS AND CONDITIONS OF SERVICE: ADMISSION, MEDICAL SERVICES, AND FINANCIAL AGREEMENT (Page 1 of 3)

UCSF Health

UNIT NUMBER
PT. NAME
BIRTHDATE
DATE OF SERVICE

TERMS AND CONDITIONS OF SERVICE: ADMISSION, MEDICAL SERVICES, AND FINANCIAL AGREEMENT (Page 2 of 3)

(see UCSF Medical Center's Notice of Privacy Practices for a description of the specific circumstances under which UCSF Medical Center may release this information). For example, UCSF Medical Center may release a copy of my patient record to health care providers, health plans, governmental agencies and workers' compensation carriers. Additionally, I understand that if I am diagnosed with cancer, a reportable disease in California, UCSF Medical Center is required by law to report my diagnosis to the State Department of Health Services.

7. **SMOKING:** Smoking is NOT allowed on the premises of UCSF Medical Center. Smoking has been determined to be hazardous to your health. If you are a smoker, we advise you to stop smoking. If you have a recent history of smoking in the last year, we advise you to continue to stop smoking. Alternatives to help curb your cravings for nicotine are available. Patients are not allowed to leave the hospital to smoke. Please speak with your clinical team to learn more about these alternatives or if you have any questions concerning smoking cessation. This policy applies to patients and visitors of the Medical Center.
8. **BEHAVIOR:** UCSF has a zero tolerance for intimidation, violence, and discrimination on our premises. As such, UCSF is committed to maintaining a safe workplace that is free from threats and acts of intimidation, violence, and discrimination. For the safety and security of our patients, visitors and staff, weapons, knives, alcohol, illegal drugs and other dangerous materials are not allowed. It is the expectation of the Medical Center that you and your visitors conduct yourselves in a respectful, non-violent, non-discriminatory, and non-abusive manner and that you do not leave the hospital at any time during your stay. It is against hospital policy for you to leave your assigned unit with property belonging to the hospital (example: gowns, IV machines, oxygen tanks, etc.). You may be discharged if you leave the hospital without informing your clinical team or if you repeatedly violate the hospital's smoking policy.

   I also understand that under California law I or my visitors cannot film, record, or disclose any images or sounds of our/my conversation with a UCSF employee or physician without the consent of all parties to the conversation and that violation of this law may result in criminal or civil liability. Please refer to your patient handbook for more information concerning your stay here at UCSF's hospitals and facilities.
9. **FINANCIAL AGREEMENT:** I understand that even if I have insurance, I may be financially responsible for some or all of my medical services. For instance, if I have a co-pay or deductible, I agree to pay the amounts I owe. If I do not have insurance that covers the service I receive, I agree to pay The Regents of the University of California for professional, hospital and clinic services, including UCSF Medical Center physician services, in accordance with the regular rates and terms of UCSF Medical Center. I also agree to pay for other professional services provided at UCSF Medical Center by other health care providers. If I am unable to pay, I understand I may qualify for public assistance, special payment arrangements and/or charity care. I also understand that when this agreement is signed by my spouse, parent or a financial guarantor, my spouse, parent or financial guarantor shall be jointly and individually liable with me for payment, including all collection fees (attorneys' fees, costs and collection expenses), in addition to any other amounts due. Unpaid accounts referred to outside agencies for collection bear interest at the current legal rate.
10. **ASSIGNMENT OF BENEFITS (INCLUDING MEDICARE BENEFITS):** I authorize and direct payment to UCSF Medical Center of any insurance benefits including hospital insurance and unemployment compensation disability benefits otherwise payable to or on my behalf for UCSF Medical Center services, including emergency services, at a rate not to exceed UCSF Medical Center actual charges. I understand that I am financially responsible for charges not paid pursuant to this agreement. I further agree that any credit balance resulting from payment of insurance or other sources may be applied to any other account owed to UCSF Medical Center by me.

500-0513B (Rev. 08/19) MEDICAL RECORD COPY GENERAL WITH FINANCIAL AGREEMENT

TERMS AND CONDITIONS OF SERVICE: ADMISSION, MEDICAL SERVICES, AND FINANCIAL AGREEMENT (Page 2 of 3)

UCSF Health

UNIT NUMBER
PT. NAME
BIRTHDATE
DATE OF SERVICE

TERMS AND CONDITIONS OF SERVICE: ADMISSION, MEDICAL SERVICES, AND FINANCIAL AGREEMENT (Page 3 of 3)

Patients insured by Part A of the Medicare Act (as primary payer): UCSF Medical Center shall transfer title prior to use of any property (excluding fixed assets or equipment) furnished or supplied to its patient or other customer in connection with its medical services billed pursuant to Medicare Part A. Notwithstanding this title provision, patient accepts that the disposal of medical products or other supplies after use will be governed by UCSF Medical Center handling and disposal protocols.

I have read, agreed to and received a copy of this Terms and Conditions of Service.

Signature of Patient or Signature of Patient Representative

Signature of Witness (required if patient unable to sign) Relationship of Representative to Patient

Signature of Interpreter Language Used

Date of Signing _____

Elective Section:

Financial Responsibility Agreement by Person Other than the Patient or the Patient's Legal Representative
I agree to accept financial responsibility for services rendered to the patient and to accept the terms of the Financial Agreement (Paragraph 9) and Assignment of Benefits (including Medicare Benefits) (Paragraph 10) set forth above.

Date Financially Responsible Party Witness

PATIENT RIGHTS NOTICE: (This question only applies to inpatient admissions only)
Would you like your agent under a durable power of attorney for health care or your next of kin to receive a copy of the Patient Rights and Responsibilities Notice? If so, please ask your admitting representative or contact the Patient Relations Department at (415) 353-1936.

500-0513C (Rev. 08/19) MEDICAL RECORD COPY GENERAL WITH FINANCIAL AGREEMENT

TERMS AND CONDITIONS OF SERVICE: ADMISSION, MEDICAL SERVICES, AND FINANCIAL AGREEMENT (Page 3 of 3)

ThyroSeq®
Thyroid Genomic Classifier

PATIENT ACCESS PROGRAM

ThyroSeq® GC is a test used to help determine whether a lump or nodule in your thyroid is benign (non-cancerous) or malignant (cancerous). Most thyroid nodules are non-cancerous or benign but the only way to be certain is to examine the cells in the nodule. This is done by performing a fine needle aspiration or FNA.

What is an FNA?

For those thyroid nodules that are large or have suspicious ultrasound features, a Fine Needle Aspiration (FNA) biopsy is frequently performed to collect cells for diagnostic cytology. FNA biopsy is a procedure performed by your doctor by inserting a very small needle into your thyroid using ultrasound guidance to collect a small sample of cells from your thyroid nodule.

What happens after my FNA biopsy?

The FNA biopsy is sent to a doctor called a cytopathologist, who is specially trained to diagnose disease by examining your body's cells under a microscope. After careful examination of your FNA biopsy material, the cytopathologist is often able to provide a definitive diagnosis of benign or malignant disease in most cases.

Sometimes the cytopathologist is not able to make a definitive diagnosis and the results are **"indeterminate" (not conclusively benign or malignant)**. In the past, surgery was recommended for most patients with indeterminate FNAs even though most thyroid nodules are benign.

If your thyroid nodule is found to be benign, no further treatment is typically required. For nodules found to be malignant on FNA cytology, surgical treatment is typically recommended.

However, in those nodules where cytology is indeterminate, clinical management is not clear and many of the cases can avoid surgery by using ThyroSeq.

Today improved testing is available and your physician may order the ThyroSeq test using the cells that have already been collected, avoiding another biopsy and potentially unnecessary surgery.

What is the ThyroSeq Test and How Does it Help Me?

The ThyroSeq test gives you and your doctor insight into your thyroid nodule. ThryoSeq is specifically designed for thyroid nodules when other clinical tools are unable to confidently say whether your thyroid nodule is benign or malignant.

ThyroSeq utilizes cutting-edge sequencing technology to identify key factors unique to your thyroid nodule. Your doctor will use ThyroSeq results in conjunction with cytology and your personal health to determine your treatment plan.

ThyroSeq can help clarify all types of indeterminate cytology, provide an accurate diagnosis, and help avoid unnecessary surgery. **Visit our website at www.thyroseq.com**

THYROSEQ® PATIENT ACCESS PROGRAM

Our ThyroSeq Patient Access Program is to ensure that all of the patients and physicians we serve have access to Thyroseq, regardless of insurance coverage or income.

Medicare

Medicare typically covers your Thyroid FNA except for a small co-insurance. There is no other out-of-pocket expense for the ThyroSeq panel.

Private Insurance

Insurance companies often cover your thyroid FNA and ThyroSeq. Based on your eligibility and benefits, you may be responsible for an annual deductible, co-insurance and/or copayment as indicated on your explanation of benefits. You may contact your insurance company directly and provide CPT code 0026U to determine an estimate of your out-of-pocket expense.

Financial Assistance

Financial assistance is available to ensure that this valuable test is available to any patient that can medically benefit from the results.

Contact Us

If you have any questions, call our **ThyroSeq Patient Access Team at 855.725.6444,** weekdays from 8:30 am - 5:00 pm EST.

SONIC HEALTHCARE USA
A Division of Sonic Healthcare

Assignment of Benefits *(If your health plan requires)*

For services rendered by Laboratory, I assign all applicable health insurance benefits and/or insurance reimbursement as well as rights and obligations that I have under my health plan to Laboratory including the right to:

- Release medical and insurance information necessary to process claims or appeal.
- Release medical records related to services provided by Laboratory when it is required to process a prior-authorization.
- Submit claims to the health plan.
- File appeals with the health plan or with other agencies as necessary.
- Collect payment of any and all medical benefits and insurance proceeds (including without limitation Medicare and Medicaid).
- Bill Patient/Guarantor for payments made by the health plan for services rendered by Laboratory.

A copy of this form may be submitted with your claim for payment.

I, _____, have read and understand the information as documented above including any financial responsibility that may result from this testing.

Signature of Patient/Guarantor	Relationship to Patient	Date

Importance of Procurement Training

TABLE 3
Original FNAB Diagnosis of 102 Breast Carcinomas Included in the Study

Physician	Cancer or atypical by FNAB	False-negative or nondiagnostic	Sensitivity	Sampling error	Interpretive error
Formally trained	53	1	98%[a]	0	1
Without formal training	36	12	75%	11	1

[a] $P = 0.0014$ versus physicians without formal training (chi-square test).

Ljung B-M *et.al.* Diagnostic Accuracy of FNAB is Determined by Physician Training in Sampling Technique. Cancer (Cytopathology) 2001;Vol 93, No 4, 263-268

Patient Care 3: Performance of Fine Needle Aspirations				
Level 1	Level 2	Level 3	Level 4	Level 5
Recognizes indications for fine needle aspirations; properly identifies patient and describes the anatomy of the area Describes potential adverse patient events of various superficial fine needle aspiration procedures	Performs a simple fine needle aspiration with appropriate patient consent and time-out with assistance (actual or simulated) Describes potential adverse events for specific clinical scenarios	Independently performs a simple fine needle aspiration; performs a complex fine needle aspiration with assistance Manages adverse patient events, with assistance (actual or simulated)	Independently performs a complex fine needle aspiration Independently manages adverse patient events (actual or simulated)	Teaches/consults in the performance of fine needle aspirations
☐	☐	☐	☐	☐ ☐ ☐ ☐

Comments:

Not Yet Completed Level 1 ☐

Not Yet Rotated ☐

Thank you!