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Skin Biopsy & Cryosurgery

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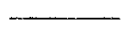
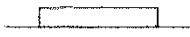



Learning Objectives: Skin Biopsy

1. Practice three skin biopsy techniques: shave, punch and elliptical excision
2. Be familiar with the supplies and equipment needed to do skin biopsies in the office setting
3. Know how to remove a lesion with cryosurgery

Primary Care Approach to Skin Lesions

1. History
 - Duration
 - Location and distribution
 - Symptoms
 - Past history of similar lesions Family history of similar lesions
 - Medications
 - Allergy history
 - Occupation, exposures, travel, pets
2. Physical examination
 - Obtain adequate skin exposure; visualize all lesions
 - Use standard precautions (gloves)
 - Note the distribution, location (e.g. exposed vs. covered skin)
 - Determine/describe the primary lesion
 - (macule, plaque, papule, nodule, vesicle, bulla, pustule, wheal)
 - (color, hyper or hypopigmentation, pattern)
 - Identify secondary lesions
 - (scales, crusts, erosions, ulcers, fissures, atrophy, excoriations)
3. Formulate a differential diagnosis
4. Perform indicated tests
 - Scraping (e.g. scabies)
 - KOH prep for fungus
 - Gram stain and culture of pustules
 - Dark field exam for primary syphilis (rarely done at present)
 - Biopsy (punch, shave, excisional)
 - Serology (syphilis, lupus, Lyme ...)
5. Treat appropriately (refer if necessary)
 - If the identity of the lesion is unknown, don't treat it- biopsy or refer

Guide to Skin Biopsy Techniques

	 Flat (nonpalpable, color change only)	 Raised (plaque)	 Raised (papular/nodular)	 Indurated**	 Pedunculated
<i>White</i>	punch (part normal)	shave	shave	punch / ellipse	shave or scissors
<i>Skin Tone</i>		shave	shave	punch / ellipse	shave or scissors
<i>Pink</i>	punch	shave	shave or punch	punch / ellipse	shave or scissors
<i>Red</i>	punch	shave	shave or punch	punch / ellipse	shave or scissors
<i>Purple</i>	punch	shave	punch	punch / ellipse	shave or scissors
<i>Blue</i>	punch or ellipse*	punch or ellipse*	punch or ellipse*	punch / ellipse	
<i>Tan</i>	punch or ellipse*	punch or ellipse*	punch	punch / ellipse	shave or scissors
<i>Brown</i>	punch or ellipse*	shave into dermis scissors punch or ellipse*	punch or ellipse*	punch / ellipse	shave or
<i>Black</i>	punch or ellipse*	punch or ellipse*	punch or ellipse*	punch / ellipse	shave or scissors

* Entire lesion should be biopsied. Use punch biopsy if lesion diameter is smaller than 4mm, use elliptical biopsy if lesion diameter is larger than 4mm.

** Punch or ellipse biopsy must extend into fat

Note: These are general guides only and are not substitutes for proper training in recognition and identification of skin lesions

How to Do a Biopsy

Shave Biopsy

1. Anesthetize the Skin
 - Position needle perpendicular to skin Inject intradermally
 - Raise wheal under lesion
2. Stabilize Skin
 - Stretch skin with finger and thumb
3. Select Cutting Instrument
 - Select razor or # 15 scalpel
4. Make Incision
 - i. Angle scalpel blade or curve razor between thumb and forefinger for proper depth.
 - ii. Use smooth, even cutting motion

Excisional Biopsy

1. Plan Excision
 - Outline excision with surgical pen (elliptical, diamond, hexagon)
 - Make elliptical excision with length 3x width
2. Make Initial Excision
 - Begin with point of scalpel blade
 - Use middle of scalpel blade for middle of incision
 - End with point of scalpel blade at end of incision
 - Angle blade edge slightly away from lesion
3. Excise Incision
 - Lift* corner of excision with tissue forceps
 - Evenly* undermine the skin with scalpel or scissors at level of subcutaneous fat
4. Close Wound
 - Select suture placement sites by using "rule of halves"
 - Grasp needle 1/3 distance from eye with needle holder
 - Place needle point perpendicular to skin, 1-2 mm from wound edge
 - Drive needle point down, then up into center of wound
 - Pull needle through with holder
 - Repeat process from center of wound to point 1-2mm from opposite wound edge
 - Approximate wound edges by tying two or more surgical knots

Punch Biopsy

1. Anesthetize the Skin
 - Position needle perpendicular to the skin
 - Inject intradermally
 - Raise wheal under lesion
2. Stabilize the Skin
 - Stretch the skin with thumb and forefinger
3. Cut Core Biopsy
 - Place punch perpendicular to skin surface
 - Apply steady downward pressure
 - Turn punch smoothly in clockwise direction
 - Stop when punch reaches subcutaneous fat ("gives way")
4. Remove Biopsy Core
 - Press fingers downward on adjacent skin to pop up core
 - Lift core with needle or forceps
 - Cut base of core with tissue scissors
5. Close Wound
 - Select suture placement sites by using "rule of halves"
 - Grasp needle 1/3 distance from eye with needle holder
 - Place needle point perpendicular to skin, ~ 2 mm from wound edge
 - Drive needle point down, then up into center of wound
 - Pull needle through with holder
 - Repeat process from center of wound to point 1-2mm from opposite wound edge
 - Approximate wound edges by tying two or more surgical knots

Common Skin Biopsy Techniques- Procedural Information

What doctors need to know about skin biopsy

- Biopsies have limitations, may exclude disease but establish a specific clinical diagnosis
- Type of specimen, area of lesion biopsied, depth of biopsy is crucial to diagnosis, so some understanding of the histology of the disease is important
- Clinical and historical data improves histologic interpretation by pathologist
- Histologic description/diagnosis does not equal a clinical diagnosis, e.g. there is no clinical disease "subacute dermatitis" or "spongiotic dermatitis"
- Dermatopathologists are better trained than general pathologists in reading skin
- "Margins clear" does not equate with surgical margins for malignancies. Know your limitations: in biopsies, in interpretation, in treatment

What patients need to know about biopsies

- All biopsies leave scars
- Reasons for biopsy
- Alternatives, if available
- How and when results of biopsy will be reported
- Wound care instructions
- Follow-up

Indications

- To make or confirm histopathologic diagnoses
- To accomplish definitive treatment of abnormal, malignant, atypical lesions
- To perform elective removal for cosmetic reasons

Contraindications

- Infection at the biopsy site
- Bleeding disorder
- Allergy to local anesthetics

Surgical Safety

- Hepatitis B vaccines are recommended for all medical professionals whose work puts them at potential risk for exposure to Hepatitis B
- Double glove when there is greater potential for needle sticks, cuts (extended procedures)
- Wear eye guards when there is potential for splashing, squirting, spraying
- Masks are worn for elliptical excisions, larger surgeries and if you have a respiratory infection or are a Staph or Strep carrier
- Contaminated material disposal:
 - Sharps go in OSHA and State OSHA approved containers which can be provided by your local lab or medical waste provider
 - Blood or other body fluid drainage "soaked" material disposed in red biohazard plastic bags, but blood-stained gauze can go in routine trash. Check into state OSHA rules.

Post-procedure Care

Open Wounds

- Covered wounds heal more quickly and avoid scab formation
- Remove dressing in 12-24 hours, gently wash BID with soap and water Cover wound with thin film of petrolatum or antibiotic ointment
- Cover with Band-Aid or nonadherent dressing for at least 5 days or until re-epithelialized;

Sutured Wounds

- Remove dressing in 12-24 hours, gently wash with soap and water; remove crusts
- Cover with thin film petrolatum or antibiotic ointment; Band-Aid optional
Showers and baths safe; avoid prolonged soaking, hot tubs, swimming
- Avoid activities, movements which stress, stretch, pull wound

Suture Removal

- Face: 4-6 days; apply Steri-Strips
- Chest, abdomen, upper extremities, scalp: 7-10 days
- Back, lower extremities: 12-20 days
- Removing sutures early reduces railroad tracking on skin

Possible Complications

Bleeding

- Rarely a problem in small biopsies
- Avoid ASA and NSAIDS for 10 days before excisions
- Don't stop Coumadin; use caution; for large excisions may need to switch patients from Coumadin to heparin
- Use pressure dressings (gauze over site then wrap tightly with Kling, Coban or Ace) when patients on NSAIDS, Coumadin, and with wounds and sites prone to bleeding
- Apply cold packs (chopped ice, gel packs, frozen vegetables) frequently in 3-5 minute applications over first 24 hours (usually not necessary for small biopsies)

Scarring

- All surgery leaves scars; goal is to minimize their appearance
- Biopsy/excise tissue only when necessary
- Recognize your skills; when necessary, refer biopsies in cosmetically important areas.
- Younger people (children and young adults) have less forgiving skin than older folks
- Certain body areas prone to scarring badly include: mandible, chest, neck, shoulders, hands, feet
- Always advise patients there will be a resultant scar; don't minimize

Infections

- Uncommon with skin biopsies; usually Staph aureus, less commonly Strep
- Candida can cause infections in intertriginous areas and toes especially if antibiotics used
- When frankly infected, cellulitic, purulent, and in patients with prosthetic devices use oral antibiotics; for local infections mupirocin (Bactroban) ointment adequate
- Candida infections in intertriginous areas and feet: topical antifungal
- Antibiotic prophylaxis only for mucosal biopsies and large excisions

Adverse Reactions

- Most common: allergic contact dermatitis to neomycin (in triple antibiotics, Neosporin), occasionally due to bacitracin, polymyxin B
 - Red bumpy or vesicular rash, pruritic
 - Stop neomycin, may use topical corticosteroid
- Irritant dermatitis
 - Polymyxin: red, inflamed, may be itchy or sore; treat by discontinuing drug
 - Tape: red, inflamed, itches or sore; stop tape, change type of tape, change direction
- Reaction to Suture: remove suture as soon as is safe Reactions to anesthesia
- Rare allergies to lidocaine, but can occur, often begin as local urticarial
 - Epinephrine sensitivity: syncopal episode, palpitations; avoid using epinephrine if known
 - Preservatives can cause generalized reactions (very rare)
 - No cross reactivity between novocaine and lidocaine

Documentation

Document all procedures in medical record

What was done

How

Why

Complications

Specimen disposition (submission to path lab, discard)

Patient instructions

Samples of proper documentation

Shave/saucerization biopsies

Dx: Diagnosis of possible BCC and need for path diagnosis discussed. Complications including scar discussed. Consents to shave biopsy left ear.

Prep: Alcohol

Anesthesia: 1% lidocaine/ epi/ NaHCO₃

Procedure: Shave biopsy. Aluminum Chloride for hemostasis. Band-Aid dressing.

Specimen disposition: Specimen to pathology.

Patient Education: Wound care instructions. Return visit in 2 weeks for wound check and pathology results.

Punch biopsy

Dx: Possible diagnoses and need to confirm lupus discussed. Complications including scar reviewed. Consents to two biopsies left arm.

Prep: Alcohol prep

Anesthesia: 1% lido/ epi/ NaHCO₃

Procedure: Two 3.5mm punch biopsies to depth of sub cutis obtained from the left upper outer arm and left upper inner arm. Each closed with one 4-0 nylon suture. Band-Aid dressings.

Specimen disposition: One specimen for routine pathological analysis, one in Michel's for DIF.

Patient Education: Wound care instructions. Return in 10 days for suture removal and to discuss results

Elliptical excision biopsy

Dx: Atypical nevus 1.0 x 0.5cm right upper back

Prep: Betadine and alcohol

Anesthesia: 2% lido/epi/ NaHCO₃

Procedure: The possible diagnoses, procedure, need for biopsy, potential complications including scarring were discussed and she consents to procedure. Patient was placed prone on the operating table, local anesthesia achieved, skin prepped and draped in usual sterile fashion. The lesion and a 1 mm clear-appearing margin excised in elliptical fashion to depth of sub cutis. Bleeding points electrodesiccated. Closed with seven 4-0 nylon sutures. Final length 3.0cm. Tolerated procedure well. Polysporin and pressure dressing.

Specimen disposition: Specimen to path

Patient Education and Aftercare: Wound care instructions given. Return visit for suture removal and results in 2-3 weeks.

Patient Education

Care of Open Wounds

1. Your wound will heal from the bottom and sides inward. These wounds heal best when covered. Healing can take 10 to 20 days.
2. Remove the dressing in 24 hours. Clean the wound with soap and water daily.
3. You may shower, but avoid baths. Pat the wound dry, apply a thin film of antibiotic ointment (Bacitracin or Polysporin) or petroleum jelly then cover with a Band-Aid. Continue this until the wound has healed over.
4. Contact the office if signs of infection appear.
These include:
 - Red, painful, swollen and warm
 - Red streaks around wound
 - Yellow or green pus in wound
 - Chills or fever

Patient Education

1. Remove the dressing in 24 hours. Avoid activities or movements that stress or pull the wound.
2. Avoid the use of aspirin
3. Clean the wound daily with soap and water. Remove any crust. Pat dry.
4. Showering is permitted, avoid bathing and swimming.
5. After the wound is clean, apply a thin film of antibiotic ointment (Bacitracin or Polysporin) or petroleum jelly (Vaseline) over the sutures. Covering the wound with a dressing or Band-Aid is optional.
6. Contact the office if signs of infection appear.
These include:
 - Red, painful, swollen and warm
 - Red streaks around wound
 - Yellow or green pus in wound
 - Chills or fever
7. Sutures should be removed _____

Supplies and Instruments

1. Prep solutions:
 - isopropyl alcohol
 - povidone-iodine,
 - chlorhexidine
2. Gauze, 3x3 or 4x4, cotton-tipped applicators; sterile for excisions
3. Drapes, plastic, cloth or paper (fenestrated) for elliptical excisions
4. Syringes, 1 and 3 cc
5. Needles, 22 gauge to draw up solutions, 30 gauge for injections
6. Lidocaine (0.5, 1, or 2%) with or without epinephrine 1: 100,000 buffered with sodium bicarbonate (1 part NaHCO₃ : 9 parts lidocaine) -premix in bottle, can be kept 30 days
7. 15 or 15C sterile surgical blades on handles or placed on #3 knife handle
8. Scalpel blade remover
9. Double edged straight razor cut in half
10. Small tissue forceps (e.g. Adson 4 3/4in, 1x2 teeth, 1 mm tip)
11. Small tissue scissors, straight or curved 3 1/2-4in (e.g. Gradle or tenotomy 3 3/4in)
12. Needle holders 4 1/2 - 5 in., smooth jawed, small tip (e.g. Webster 5 1/4")
13. Punches, disposable, 2-8mm (3, 3.5, and 4 mm punches are used most commonly)
14. Hemostatic agents:
 - aluminum chloride (AlCl₃)
 - silver nitrate (stains brown)
 - electrocautery device or battery-operated cautery
10. Suture and Needles:
 - nylon most useful
 - use 4-0 or 5-0 on C-17
 - P-3 or FS-3 needle
 - on face use 6-0 on C-17 or P-3 needle only
 - proline is used on scalp; it is blue and easily distinguished from hair
11. Alcohol swab or gauze for cleaning surgical site at biopsy completion
12. Petrolatum or antibiotic ointment (polymixin/bacitracin, mupirocin)
13. Band-Aids or telfa or gauze wrap

Frequently Asked Questions

1. How do I match the biopsy technique to the lesion?

Lesions that are most suitable for shave biopsies are either elevated above the skin, or pathology is confined to the epidermis and uppermost (papillary) dermis. Examples include seborrheic or actinic keratoses, skin tags, warts, and superficial basal or squamous carcinomas. Shave biopsies should not be used for pigmented lesions; if an unsuspected melanoma is partially removed, it cannot be properly staged. The punch is an ideal procedure for diagnostic skin biopsy or removing small lesions, and often a better cosmetic result when sutured closed than a shave biopsy. Excisions are reserved for lesions that cannot be removed with a punch due to size, depth or location. Its main advantage is the amount of tissue that can be excised, allowing for multiple studies (culture, histopathology, immunofluorescence, electron microscopy) from one biopsy site. Excisions are especially well suited for removal of large skin tumors or inflammatory disorders deep in the skin, involving the panniculus.

2. What part of the lesion should be biopsied?

Generally, lesions with the most advanced inflammatory changes should be chosen; evolutionary changes may take several days and a too early biopsy may reveal only nonspecific features. When in doubt, biopsies of two or three clinically different appearing lesions may be helpful. For blistering diseases, the reverse is true; the earlier the lesion, the more specific the histopathology. Consequently, only the newest vesicles and blisters should be biopsied, usually within 48 hours of their appearance. Older lesions with secondary changes such as crusts, fissures, erosions, excoriations, and ulcerations should be avoided since the primary pathological process may be obscured. For nonbullous lesions, the biopsy should include maximal lesional skin and minimal normal skin. For lesions between 1-4mm in diameter, biopsy the center or excise the entire lesion. For large lesions, biopsy either the edge, the thickest portion, or area that is most abnormal in color because these sites will most likely contain the distinctive pathology. Whenever possible, remove vesicles intact, making sure to include adjacent normal appearing skin, since disruption makes histological interpretation more difficult. Similarly, bullae should be biopsied at their edge, and include several millimeters of adjacent non-bullous skin. This is critical for determining the "split" or blister level of the skin, which is essential for accurate diagnosis.

3. Should sterile gloves, mask and gown be used during a skin biopsy?

Shave and punch biopsies are clean, not sterile procedures; mask, gown and sterile gloves are not necessary. A mask is recommended for operators or assistants known to be respiratory carriers of *Staphylococcal* or *Streptococcal* organisms. Mask, gown and sterile gloves are indicated for excisions, and are reasonable for any patient at increased risk for infection.

4. How are wrinkle lines used to orient a biopsy?
Round wounds tend to be pulled open in the direction of skin tension lines known as Langer's lines, generally parallel the direction of collagen in the dermis. Tension lines can be demonstrated by gently compressing relaxed skin with the thumb and index finger, and wrinkle lines on the face are another good indicator. Surgical excisions placed parallel to tension lines close more easily and cosmetically those placed at right angles. For a punch biopsy, stabilize the skin with the thumb and forefinger, stretching it slightly perpendicular to the normal skin tension lines. This will produce an oval rather than a round wound, facilitating closure.

5. When and where should epinephrine be avoided in performing local anesthesia?
Avoid the use of epinephrine for acral lesions, or when large quantities are needed, especially in patients with cardiovascular or peripheral vascular disease, and in patients with severe hypertension.

6. How wide should the margins be around a suspected melanoma?
The biopsy of suspected melanoma, even when done by excisional technique, is always a biopsy only and not definitive treatment. The depth of tumor invasion determines the amount of tumor free margin. In practical terms, this means that the original excision must be revised after the pathology report has been reviewed, usually creating wider tumor margins and extending the level of excision down to the deep muscle fascia. This is required even if the margins of the original biopsy are reported to be "free of tumor." Practitioners who have no clinical training in excisions, or have limited expertise in diagnosis and treatment of melanoma, should refer these patients to a qualified dermatologist or surgeon. Additionally, short and long-term follow-up is mandatory for all patients diagnosed with melanoma, making referral to a dermatologist with expertise in melanoma most appropriate.

7. What follow-up is necessary for a basal cell or squamous cell carcinoma if the biopsy margins are read as "clear" by the pathologist?
Pathologist cannot determine tumor-free margins on shave biopsies. Both basal cell and squamous cell carcinoma require definitive treatment beyond punch or excisional biopsy. The most appropriate treatment is determined by several criteria, including lesion size, depth, location, clinical history, previous treatment, patient age, health status, and histological features of the cancer. In the absence of special training, these patients should be referred to a dermatologist or surgeon trained in managing skin cancers. Patients with no melanoma skin cancer should be evaluated 3 and 6 months post-treatment, and at least annually thereafter. The follow-up examination should include inspection and palpation of the excisional scar, and palpation of regional lymph nodes. Other potential cancer sites should be examined, with particular attention to sun-exposed areas of the body, including the head, neck, forearms, and hands. Rough areas, scaling, and lumps may indicate tumor recurrence or extension, or a new cancer. Total body skin exams should be done at least annually in all patients with a history of skin cancer, and patients should be taught skin self-examination techniques. Patients who have more than three skin cancers or who have undergone organ transplantation are at higher risk for additional tumors, and may require more frequent examinations.

8. How should the biopsy specimen be submitted to pathology?
For light microscopy, the specimen should be placed in a 10% buffered formalin solution provided by pathology; each specimen should be placed into a separate bottle and identified. Specimens less than 1 cm in greatest dimension can be adequately fixed in 30 ml of formalin, but larger specimens will need more formalin and should be sectioned in order to ensure adequate fixation. Definitive excision of tumors should have margins (superior, inferior, lateral, medial) identified by suture needle placement or tissue dye. Identify the site of the needle or dye with a drawing on the pathology request form. Special studies require special handling. Specimens to be submitted for direct immunofluorescence (blistering diseases and lupus erythematosus) should be fixed in Michel's solution, whereas specimens submitted for electron microscopy should be fixed in glutaraldehyde. Specimens requiring bacterial or fungal cultures can be submitted in a sterile container with non-bacteriostatic saline, and viral studies require viral transport media. The pathology laboratory can supply all fixatives and transport media.
9. What size needle and suture are best for closing a punch biopsy?
Suture size is indicated by the code 0; the more 0's, the smaller the suture diameter. Generally, 4-0 or 5-0 monofilament nylon can be used on the body and scalp, and 6-0 nylon on the face. For skin, reverse cutting (FS) and cutting needles (CE) are used on thick skin, whereas plastic (P), plastic skin (PS), and premium (PRE) are used for cosmetic closures. The size of the needle is ranked by a number, with higher numbers identifying larger needles. Needle curvature is measured in terms of proportion of a circle, with 1/4, 3/8, and 1/2 curves available. Most biopsy wounds in thick skin can be closed using a FS-3 or CE-3 needle, and P-3 can be used for the face, all with a 3/8 curvature. C-17 needles were specifically developed to close punch biopsies, and are less expensive than FS, CE, P or PRE-needles.
10. How long should sutures be left in place after closing a biopsy site?
Generally, sutures on the face can be removed in 3-5 days, followed by the application of semi-permeable adhesive strips to reduce wound tension. Sutures on the chest, abdomen, arms and scalp can be removed in 7-10 days and those on the back and legs in 12-20 days.
11. How should the wound be dressed following a biopsy?
Wounds heal faster when moist and under an occlusive or semi-occlusive dressing. All biopsy wounds can be dressed with a thin film of an antibiotic ointment (Bacitracin, Polysporin, mupirocin) or petrolatum to prevent crust formation, then covered with a Band-Aid or other non-adherent covering, and topped with a gauze dressing and tape.
12. What should the patient be told about wound care following a biopsy?
The dressing should be removed in 12-24 hours and thereafter cleaned with soap and water twice daily. After cleaning, the wound should be covered with an antibiotic ointment or petrolatum. Wounds healing by secondary intention (shave biopsies) need to be redressed after each cleaning until healed over, or for at least five days, whereas this is optional for sutured wounds. For sutured wounds, showering is permitted after 24 hours, but use of hot tubs is prohibited until the sutures are removed.

Problems and Pitfalls

Scar Formation

All patients should be told that biopsies leave scars, and internists may wish to refer lesions on the face (particularly the eyelids and the nose), neck, upper chest, palms and soles, to dermatologists or plastic surgeons. Hypertrophic scars tend to occur over the deltoid and chest areas, and in patients with a previous history of hypertrophic scar formation. Whenever possible, avoid the deltoid and chest area, as well as the tibial area where healing is slow. Patients with a history of hypertrophic scarring requiring a biopsy in a cosmetically important area should be considered for referral

Allergy to "caine" Anesthetics

The most common reaction to local anesthetic is psychogenic, or vasovagal, and allergic reactions are quite rare. However allergic reactions, when they occur, can be fatal. Type I allergic reactions can occur without previous exposure to an anesthetic, and certainly you should avoid repeat exposure to any patient who gives a history of anaphylaxis. Type IV delayed hypersensitivity reactions are much more common and less severe than type I reactions, and classically present like a contact dermatitis, with a rash at the site of exposure. Unlike type I reactions, type IV reactions require previous exposure to an agent from the same class.

Many patients will report a vasovagal reaction as an "allergy." Unfortunately, it is difficult to discount these reports without formal challenge testing, which often is not practical. In patients with a documented or presumed allergy to local anesthetics, several options are available. First, attempt to elicit the class of the anesthetic responsible for the reaction. If the patient claims an allergy to an ester agent (procaine, tetracaine, chlorprocaine), then an amide agent should be used (lidocaine, mepivacaine, bupivacaine, etidocaine). Amide allergic reactions are so rare that it is more likely that the patient suffered a reaction to the preservatives in the multi-dose vial. If a preservative reaction is suspected, then a preservative free agent can be used. If the procedure is a small procedure like a shave or punch biopsy, 0.9% saline, or dilute diphenhydramine (2.5 mg-5 mg/cc) injected intradermally can provide some measure of anesthesia.

Allergic Reaction to Tape or Topical Antibiotic

Tape reactions are usually irritant rather than allergic, and improve simply by not taping. Reactions to topical antibiotics are not uncommon and present as redness, and itchiness around the wound, and occasionally vesicles may appear. If this occurs, and is severe, stop the antibiotic ointment and apply a topical corticosteroid ointment for several days. A topical antibiotic is probably unnecessary following a biopsy; dressing the wound with petrolatum is usually sufficient.

Patient at Risk for Bleeding

All patients should be asked about bleeding disorders, bleeding with previous surgery, and use of medications known to interfere with hemostasis. With the exception of very superficial shave biopsies, patients with bleeding disorders or taking warfarin should be referred to a qualified dermatologist or surgeon, whereas patients taking aspirin can usually be managed with careful attention to hemostasis and use of a pressure bandage following the biopsy. A pressure bandage can be made by tightly taping a folded 4 x 4 gauze pad directly over the wound, or securing it with an elastic bandage or self-adhering wrap. An ice pack applied for 3 to 5 minutes several times a day can decrease bleeding, hematoma formation, swelling, and pain.

Needle Stick or Scalpel Cut

Performing skin biopsies puts the operator at risk for blood-borne infections. Accordingly, vaccination for hepatitis B is indicated and universal precautions should be observed by wearing gloves and eye-guards. Double gloving may provide increased protection against blood exposure. Recapping used needles increases the risk of needle sticks and should never be attempted. Used sharp objects must be disposed in approved (OSHA) containers provided by the pathology laboratory or medical waste disposal company. A needle stick or scalpel cut could potentially transmit HIV, hepatitis B and C. Your office or institution should have a policy for managing serious body fluid exposures and you must be familiar with that policy, or know how to access it quickly. Clinical information should be documented on the "source" patient including risk factors for blood borne infection and appropriate serological tests should be performed. Post exposure prophylaxis is available for HIV and hepatitis B, and effectiveness is related to how soon after exposure it is initiated.

Lesion Disappears After Injection of Local

Not uncommonly, small lesions can be obliterated after the injection of a local anesthetic, due to the epinephrine induced blanching and wheal formation. To prevent this from happening, mark the area of the lesion with a surgical marking pen prior to injecting the local anesthetic.

Oozing from Wound Continues after Shave Biopsy

Most often, bleeding from a shave biopsy can be controlled with local pressure alone for one to two minutes. The application of 20% aluminum chloride will control bleeding at sites not responding to simple pressure, but to be effective, the wound must be as dry as possible. Immediately after removing the gauze pad from the wound, apply the aluminum chloride with a cotton-tipped applicator using a firm, twisting or rubbing motion. If this is only partially effective, dry the wound with gauze again, and reapply the aluminum chloride. A combination of aluminum chloride and firm pressure for several minutes will control bleeding even in patients taking aspirin.

Cannot Close Wound Edges after Excisional Biopsy

Wound edges may not approximate for a variety of reasons. The length of the wound may be too short for the width (3: 1 preferred), thus making it difficult to approximate the edges. Insufficient depth of the excision can cause this also. Excisions that fail to extend to subcutaneous tissue depth will not approximate easily. The wound may be in an area where the skin is not particularly mobile, such as over a bony prominence.

Or, the wound may simply be too large, and oriented such that lines of tension are pulling the wound apart. In some of these wounds, skin tension can be reduced by "undermining" the edges of the wound with tissue scissors or scalpel at the level of the subcutaneous tissue creating mobile tissue flaps that can be more easily stretched. However, a solid knowledge of the cutaneous anatomy and vessels and nerves in the subcutaneous compartment is essential to avoid serious complications. Because of the complexity and complication potential, clinical training under the supervision of an expert is highly recommended before attempting excisional biopsies.

Needle Bends while Suturing

Suture needles are made of non-corrosive stainless steel, especially forged to achieve maximum strength and ductility, the ability to bend under pressure without breaking. Suture needles have an eye, body, and point. Most needles have a swaged eye where the metal of the needle is molded around the end of the suture. That part of the needle is likely to break or bend if mishandled. The body of the needle is designed for great strength and secure grasping; it is usually flattened with slight convex or concave sides to avoid rotation in the holder while suturing. A needle that bends during suturing is either held too close to the soft swaged eye, or is forced through the skin in a direction other than that dictated by its curve. The needle should be grasped by the needle holder about one-third the distance from the eye. This will provide maximum driving force and diminish the likelihood of bending or breaking the needle. A palm grip is recommended to increase the driving force of the needle through the skin. Place the handle of the holder in the palm, wrap the thumb and forefingers around the handles, and extend the index finger down over the tip of the holder near the needle. The needle point is placed perpendicular to the skin surface, about 2 mm away from the wound edge. The needle is driven down, and using a rotating motion of the wrist, the needle is advanced following the direction of its curve to exit in the middle of the wound (excisional) or up through the surface of the skin on the opposite side of the wound (punch).

Suture Knots Slip Loose

One of the most common reasons why surgical knots "slip" open is that they have not been properly "locked" with a double-throw knot at the beginning of the knot tying process. To begin the knot, hold the needle holder parallel to the long axis of the wound with the free end and the needle end of the suture on opposite sides of the wound. Wrap the needle end of the suture twice around the tip of the needle holder, then grasp the free end of the suture and pull through, tightening the knot in order to lay the knot flat, the free end and the needle end of the suture should have switched sides relative to the beginning. The process is repeated at least one, occasionally two more times, and with each of the knot, the two ends of the suture should have switched to the opposite sides of the wound as the knot is tightened.

The Biopsy Site Becomes Infected

Infection, although relatively uncommon, is usually the result of *Staphylococcus*, *Streptococcus*, or *Candida*. If the wound is frankly purulent, or has an associated cellulitis, culture the discharge and begin oral antibiotics to cover gram-positive organisms. Infected wounds of the hands, feet and intertriginous areas are often infected with *Candida* and can respond to topical antifungal creams.

Pathology Report Describes Nonspecific Dermatitis

Many dermatological lesions are not associated with a specific histopathology, and the biopsy for these lesions will reveal general pathological processes rather than a definitive diagnosis. In order to help the patient, you need to be able to generate a differential diagnosis that can guide the interpretation of the biopsy result. This allows you to determine that the biopsy result is compatible with or not compatible your differential. Providing the pathologist with historical and clinical information and a differential diagnosis enhances histologic diagnostic accuracy. Difficult cases, cases where the diagnosis is unclear, should be referred to a dermatologist.

Wound Dehiscence

A common reason for wound dehiscence is not placing the sutures deep enough or not penetrating the dermis into the subcutaneous tissue. Wounds sutured only through the dermis, or excised only to the depth of the dermis, will always come apart. Another common problem is removing the sutures too early, particularly in areas associated with significant tension on the wound. Finally, infected wounds may undergo dehiscence, and patients need to be instructed to call if their wound develops significant redness, pain, swelling or drainage of pus.

Cryosurgery

A. General principles

- Application of liquid nitrogen (-170 degrees C) to lesion destroys tissue
- Outcome is affected by: (1) the length of time of application, (2) the method of application, (3) the type and thickness of the lesion treated and (4) the location (body area)
- Some type of scarring is expected but is usually minimal; the melanocyte is most sensitive cell to cold, so hypo and depigmentation should be expected
- Thick lesions in cosmetically important areas of the body (face) may not be the best choice for cryosurgery
- Freezing is inherently painful
- When treating the face, especially the temples and forehead, use caution in patients with cold induced migraines
- Nerve damage can result, especially when treating distal digits.
- Pigmented lesions such as lentigines and seborrheic keratoses are effectively treated with freezing

B. Application Techniques

Cryospray: spray from thermos with specially designed tips and probes Spray centrifugally or transversely in paint brushing fashion

- Can be poured from large vacuum bottle containers into small hand-held units Readily available from gas companies

Tips: four apertures A through D

A is the largest, reserved for extensive or deep lesions

B aperture is the most commonly used; useful for treating lesions 0.5 to 1 cm in size

C aperture is used for treating smaller lesions such as warts and keratoses

D aperture is used for extremely small lesions

A wide aperture ("acne spray tip") can be used to paint large surface areas for conditions like acne or psoriasis

Cones: plastic disk with four cone-shaped openings

0.3, 0.5, 0.8 and 1 cm in diameter

Appropriate size is placed around lesions to confine the spray

Allows lateral spread of freeze to develop more quickly, reducing spraying time

Contaminated cones must be sterilized (autoclaved).

Probes

- Solid brass tips connected to the hand-held liquid nitrogen unit
- Cold is transferred along the length of the probe by conduction
- Distal end of probe is placed on lesion to freeze by contact
- Contaminated probes must be sterilized
 - microorganisms can be transferred to other patients).

Cotton-tipped applicators

- Standard and gynecologic or proctology sizes are ideal for direct lesion application.
- Cotton tips can be twisted or "wisped" for even freezing
- Liquid nitrogen (LN2) is poured from thermos into Styrofoam cups, cotton-tipped applicators are placed in cups for several seconds. Apply tip of applicator to lesion. Dispose of LN2, applicators and cup after treatment is complete; do not reuse applicator, cup or previously used LN2 to avoid transmission of organisms. Two cups keep LN2 liquid longer; bottom cup can be reused)
- Pressure of application effects freeze: Use light application for skin tags, flat warts, molluscum and firm pressure for actinic keratoses, seborrheic keratoses and warts.

Verruca Freeze

- Convenient for nursing home and office use only for benign lesions
- It cannot achieve temperatures cold enough for complete destruction of premalignant and malignant lesions

C. Lesion Specific Procedures

Warts

1. Soften wart by soaking a few minutes in water, then paring the thickened callous and wart with a# 15 blade until callous is removed or until site is too painful to further pare.
2. Apply LN2 with cotton-tipped applicator firmly on the wart long enough to whiten the wart and a 2-mm. ring of tissue around wart; use fresh applicators every 5-10 sec,
3. Or, spray wart with LN2 until wart and 2mm ring around wart whitens. Cone helps confine spray to lesion. Cryoprobe may be best to minimize damage to surrounding tissue. Use probe for small or vascular lesions.
4. Freezing should continue for 30 seconds for periungual, plantar, thick and recurrent warts, and for 15-20 seconds for thinner warts; 5-10 seconds is adequate for flat warts, molluscum contagiosum and small skin tags. Target freezing depth is 2-4 mm.

5. Protect underlying tissue by:
 - Elevating lesion with a wheal
 - Elevating the skin by pinching
 - Extending or pulling the skin away from underlying nerves
6. To prevent damage to normal tissue, the best strategy is to under-treat and re-treat until a higher level of proficiency is attained.
7. Local anesthesia is optional but recommended for periungual warts and deep tissue freezes when treating skin cancer.

Seborrheic keratoses

1. Apply LN2 with cotton-tipped applicator or spray lesion for 3-8 seconds
2. Shorter freeze time for thin lesions, longer freeze time for thicker lesions
3. No surrounding tissue need be frozen

Actinic keratoses

1. Spray lesion and 1-2 mm. border until lesion is white, continue for 15 seconds
2. Direct spray centrifugally or transversely in paintbrush pattern covering entire area
3. Or apply cotton-tipped applicator firmly to entire lesion and 1-2 mm border, whiten for 15 seconds

D. Post Treatment with Cryotherapy

1. Highly dependent on depth of freeze and associated tissue destruction

Deep freezes:

- Edema within hours
- Bullae formation in 12-24hours
- Weeping of wound for 2-3 days
- Eschar formation in 1 week, remaining for up to 1 month
- Scar and hypopigmentation may be permanent sequelae

Superficial freezes:

- Redness
- Crusting, falling off in 5-7 days
- Erythema at treatment site after crust is gone which gradually fades

2. Wound Care: Daily cleaning with soap and water

Appendix 1: Common lesions that can be appropriately treated with cryosurgery

Benign Lesions	Premalignant	Malignant
Acne Vulgaris Angioma, cherry or spider Dermatofibroma Lentigines Nevi Seborrheic keratosis Verrucae	Actinic Keratosis	Squamous cell carcinoma Basal cell carcinoma Bowen's Disease

Lesions and Freeze Times

****Freezing with a 1mm Halo beyond the Lesion****

Lesions often need more than one freeze

Lesions

Verruca Plana	5 seconds
Lentigo	7 seconds
Sebaceous Adenoma	5-10 seconds
Actinic Keratosis	5-10 seconds
Seborrheic Keratosis	10 seconds
Verruca Vulgaris	15-20 seconds
Prurigo Nodularis	30 seconds
Keloids	30 seconds
Hemangioma	60 +seconds
Keratoacanthoma	30 seconds
Dermatofibroma	60 +seconds
Granuloma Faciale	30 seconds
Granuloma Annulare	20 seconds
Chondrodermatitis	30 seconds
Plaque of psoriasis	15-30 seconds
Cherry Angioma	10 seconds
Nevus	10 seconds
Leukoplakia	15 seconds
Mucocele	30 seconds
Molluscum Contagiosum	5-10 seconds

Patient Education

Care of Cryotherapy Wounds

1. Clean treated site daily with soap and water. Bathing and showering are permitted.
2. Put a small amount of petroleum jelly or antibiotic ointment daily on scab when it forms. The scab will fall off on its own. The wound does not need to be covered.
3. *Warts:* If warts were treated, especially on the hands and feet, a blister may form. If the blister is painful, drain the fluid out of the blister by making a small hole at the edge of the blister with a needle cleaned with rubbing alcohol and pushing gently on the blister. Take care not to remove the skin covering the blister. A Band-Aid may be used to cover the blister, as the site may drain fluid.
4. *Signs of Infection:*
Call the office if any of the following signs of infection appear:
 - a) Red, painful, swollen and warm
 - b) Red streaks around wound
 - c) Yellow or green pus in wound
 - d) Chills or fever

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Shave Biopsy Procedural Checklist

1. Anesthetize the Skin
 -)> Position needle perpendicular to skin
 -)> Inject intradermally
 -)> Raise wheal under lesion
2. Stabilize Skin
 -)> Stretch skin with finger and thumb
3. Select Cutting Instrument
 -)> Select razor or # 15 scalpel
4. Make Incision
 -)> Angle scalpel blade or curve razor between thumb and forefinger for proper depth.
 -)> Use smooth, even cutting motion

Excisional Biopsy Procedural Checklist

1. Plan Excision
 -)> Outline excision with surgical pen (diamond, oval)
 -)> Make elliptical excision with length 3x width
2. Make Initial Excision
 -)> Begin with point of scalpel blade
 -)> Use middle of scalpel blade for middle of incision
 -)> End with point of scalpel blade at end of incision
 -)> Angle blade edge slightly away from lesion
3. Excise Incision
 -)> Lift corner of excision with tissue forceps
 -)> Evenly undermine the skin with scalpel or
 -)> scissors at level of subcutaneous fat
4. Close Wound
 -)> Select suture placement sites by using "rule of halves"
 -)> Grasp needle 1/3 distance from eye with needle holder
 -)> Place needle point perpendicular to skin, 1-2 mm from wound edge
 -)> Drive needle point down, then up into center of wound
 -)> Pull needle through with holder
 -)> Repeat process from center of wound to point 1-2mm from opposite wound edge Approximate wound edges by tying two or more surgical knots

Punch Biopsy Procedural Checklist

1. Anesthetize the Skin
 -)> Position needle perpendicular to the skin
 -)> Inject intradermally
 -)> Raise wheal under lesion
2. Stabilize the Skin
 -)> Stretch the skin with thumb and forefinger
3. Cut Core Biopsy
 -)> Place punch perpendicular to skin surface
 -)> Apply steady downward pressure
 -)> Turn punch smoothly in clockwise direction
 -)> Stop when punch reaches subcutaneous fat ("gives way")
4. Remove Biopsy Core
 -)> Press fingers downward on adjacent skin to pop up core
 -)> Lift core with needle or forceps
 -)> Cut base of core with tissue scissors
5. Close Wound
 -)> Select suture placement sites by using "rule of halves"
 -)> Grasp needle 1/3 distance from eye with needle holder
 -)> Place needle point perpendicular to skin, 1/2 mm from wound edge
 -)> Drive needle point down, then up into center of wound
 -)> Pull needle through with holder
 -)> Repeat process from center of wound to point 1-2mm from opposite wound edge
 -)> Approximate wound edges by tying two or more surgical knots

Cryotherapy Procedural Checklist

1. Select Appropriate Sized Applicator
 -)> Soak in liquid nitrogen
2. Apply Liquid Nitrogen to Site
 -)> Light pressure for flat warts, molluscum, skin tags
 -)> Firm pressure for raised warts, seborrheic keratosis, actinic keratosis
3. Freeze Lesion
 -)> Identify whiteness
 -)> Freeze margins for warts and actinic keratosis
4. Spray Cryospray To Freeze Lesion
 -)> Spray at appropriate distance
 -)> Spray paintbrush fashion, centrifugally or transversely

CPT	Description	Work RVUs	Fully Implemented Total Non-Facility	2022 National Medicare non-Facility Price
17000	Destruction premalignant lesions (e.g., actinic keratoses); first lesion	0.61	1.99	\$68.87
+17003	second through 14 lesions each, (List separately in addition to code for first lesion)	0.04	0.20	\$6.92
17004	Destruction 15 or more lesions (Do not report 17004 in conjunction with 17000-17003)	1.37	5.00	\$173.03
17106	Destruction of cutaneous vascular proliferative lesions less than 10 sq. cm.	3.69	10.09	\$349.18
17107	10.0 to 50.0 sq. cm.	4.79	13.15	\$455.07
17108	over 50.0 sq. cm.	7.49	18.56	\$642.29
17110	Destruction of benign lesions other than skin tags or cutaneous vascular proliferative lesions; up to 14 lesions	0.70	3.37	\$116.62
17111	15 or more lesions	0.97	3.94	\$136.35
17250	Chemical cauterization of granulation tissue (proud flesh, sinus or fistula)	0.50	2.68	\$92.75
17260	Destruction, malignant lesion trunk, arms or legs; lesion diameter 0.5 cm. or less	0.96	2.96	\$102.43
17261	lesion diameter 0.6 to 1.0 cm.	1.22	4.38	\$151.57
17262	lesion diameter 1.1 to 2.0 cm.	1.63	5.30	\$183.41
17263	lesion diameter 2.1 to 3.0 cm.	1.84	5.73	\$198.29
17264	lesion diameter 3.1 to 4.0 cm.	1.99	6.13	\$212.14
17266	lesion diameter over 4.0 cm.	2.39	6.97	\$241.21
17270	Destruction, malignant lesion scalp, neck, hands, feet, genitalia; lesion diameter 0.5 cm. or less	1.37	4.40	\$152.27
17271	lesion diameter 0.6 to 1.0 cm.	1.54	4.91	\$169.92
17272	lesion diameter 1.1 to 2.0 cm.	1.82	5.60	\$193.80
17273	lesion diameter 2.1 to 3.0 cm.	2.10	6.19	\$214.21
17274	lesion diameter 3.1 to 4.0 cm.	2.64	7.23	\$250.20
17276	lesion diameter over 4.0 cm.	3.25	8.41	\$291.04
17280	Destruction, malignant lesion face, ears, eyelids, nose, lips, mucous membrane; lesion diameter 0.5 cm. or less	1.22	4.14	\$143.27
17281	lesion diameter 0.6 to 1.0 cm.	1.77	5.33	\$144.45
17282	lesion diameter 1.1 to 2.0 cm.	2.09	6.09	\$210.75
17283	lesion diameter 2.1 to 3.0 cm.	2.69	7.17	\$28.13
17284	lesion diameter 3.1 to 4.0 cm.	3.20	8.17	\$282.73
17286	lesion diameter over 4.0 cm.	4.48	10.45	\$361.64
54050	Destruction of lesion(s), penis simple; chemical	1.29	4.19	\$145.00
54055	electro desiccation	1.25	4.01	\$38.77
54056	cryosurgery	1.29	4.21	\$15.69
54057	laser surgery	1.29	4.18	\$44.65
54060	surgical excision	1.98	5.81	\$201.06
54065	Destruction of lesion(s), penis extensive	2.47	6.55	\$26.67

ICD 10 CM Codes for common Dermatologic disorders

<u>Dermatitis and Eczema</u>	<u>L20- L30</u>
<u>Atopic dermatitis</u>	<u>L20.9</u>
<u>Contact dermatitis</u>	<u>L23.9</u>
<u>Seborrheic dermatitis</u>	<u>L21.9</u>
<u>Seborrheic keratosis</u>	<u>L82.1</u>
<u>Seborrheic keratosis (inflamed)</u>	<u>L82.0</u>
<u>Actinic keratosis</u>	<u>L57.0</u>
<u>Psoriasis, unspecified</u>	<u>L40.9</u>
<u>Epidermoid cyst</u>	<u>L72.0</u>
<u>Sebaceous cyst</u>	<u>L72.3</u>
<u>Acne. unspecified</u>	<u>L70.9</u>
<u>Skin tag</u>	<u>L91.8</u>
<u>Hemangioma</u>	<u>018.00</u>
<u>Viral wart unspecified</u>	<u>B07.9</u>
<u>Benign lesion. lip</u>	<u>D23.0</u>
<u>Benign lesion. face</u>	<u>D23.30</u>
<u>Benign lesion. neck</u>	<u>D23.4</u>
<u>Benign lesion. trunk</u>	<u>023.5</u>
<u>Benign lesion. leg</u>	<u>023.70</u>
<u>Benign lesion penis</u>	<u>029.0</u>

<u>Benign lesion scrotum</u>	<u>029.4</u>
<u>Benign lesion anus</u>	<u>D 12.9</u>
<u>Hydrocele unspecified</u>	<u>N43.3</u>
<u>Ulcer of penis</u>	<u>N48.5</u>
<u>Condyloma accuminata</u>	<u>A63.0</u>
<u>Molluscum contagiosum</u>	<u>B08.1</u>
<u>Squamous cell carcinoma of the skin, unspecified</u>	<u>C44 .92</u>
<u>Basal cell carcinoma of the skin, unspecified</u>	<u>C44.91</u>
<u>Malignant melanoma of the skin, unspecified</u>	<u>C43.9</u>

Paring or Cutting

(11050-11052 have been deleted. To report paring, see 11055-11057, or to report destruction, see 17000-17004)

11055- Paring or cutting of benign hyperkeratotic lesion leg, corn or callus); single lesion 11056 two to four lesions

11057 more than four lesions

(11060-11062 have been deleted. To report, see 11300-11313)

Biopsy

11100- Biopsy of skin, subcutaneous tissue and/or mucous membrane (including simple closure), unless otherwise listed (separate procedure); single lesion

+11101 -each separate/additional lesion (List separately in addition to code for primary procedure)

(Use 11101 in conjunction with code 11100)

(For biopsy of conjunctiva, use 681 00; eyelid, use 678101)

Removal of Skin Tags

Removal by scissoring or any sharp method, ligature strangulation, electrosurgical destruction or combination of treatment modalities including chemical or electrocauterization of wound, with at without local anesthesia.

11200* - Removal of skin tags, multiple fibrocutaneous tags, any area; up to and including 15 lesions

+11201 -each additional ten lesions (List separately in addition to code for primary procedure) (Use 11201 in conjunction with code 11200)

Shaving of Epidermal or Dermal lesions

Shaving is the sharp removal by transverse incision or horizontal slicing to remove epidermal and dermal lesions without a full-thickness. dermal excision. This includes local anesthesia, chemical or electrocauterization of the wound. The wound does not require suture closure.

11300*- Shaving of epidermal or dermal lesion, single lesion, trunk, arms or legs; lesion diameter 0.5 cm. or less

11301 lesion diameter 0.6 to 1.0 cm.

11302 lesion diameter 1.1 to 2.0 cm.

11303 lesion diameters over 2.0 cm

11305*- Shaving of epidermal or dermal lesion, single lesion, scalp, neck, hands, feet, genitalia; lesion diameter 0.5 cm or less

11306 lesion diameter 0.6 to 1.0 cm

11307 lesion diameter 1.1 to 2.0 cm

11308 lesion diameters over 2.0 cm

11310*- Shaving of epidermal or dermal lesion, single lesion, face, ears, eyelids, nose, lips, mucous membrane: lesion diameter 0.5 cm or less

11311 lesion diameter 0.6 to 10 cm

11312 lesion diameter 1.1 to 2.0 cm

11313 lesion diameters over 2.0 cm

Excision -Benign Lesions

Excision (including simple closure) of benign lesions of skin or subcutaneous tissues (i.e., cicatricial, fibrous, inflammatory, congenital, cystic lesions), including local anesthesia. See appropriate size and area below.

Excision is defined as full-thickness (through the dermis) removal of the following lesions and includes simple (non-layered) closure. The closure of defects created by incision, excision, or trauma may require intermediate (layered) closure. Layered closure involves dermal closure with separate suture closure of at least one of the deeper layers of subcutaneous and non-muscle fascial tissues. See page 57 and following for repair codes.

(For excision of lesions requiring more than, simple closure, i.e., requiring intermediate, complex, or reconstructive closure, see 12031-12057, 13100-13160, 14000-14300, 15000-15261, 15570-15770)

(For electro-surgical and other methods, see 17000 et seq)

11400- Excision, benign lesion, except skin tag (unless listed elsewhere), trunk, arms or legs; lesion diameter 0.5 cm or less

11401 lesion diameter 0.6 to 1.0 cm

11402 lesion/diameter 1.1 to 2.0 cm

11403 lesion//diameter 2.1 to 3.0 cm

11404 lesion diameter 3.1 to 4.0 cm

11406 lesion diameter over 4.0 cm

(For unusual or complicated excision, add modifier '-22')

11420- Excision, benign lesion, except skin tag (unless listed elsewhere), scalp; neck, hands, feet, genitalia; lesion diameter 0.5 cm or less

11421 lesion diameter 0.6 to 1.0 cm

11422 lesion diameter 1.1 to 2.0 cm

11423 lesion diameter 2.1 to 3.0 cm

11424 lesion diameter 3.1 to 4.0 cm

11426 lesion diameter over 4.0 cm

(For unusual or complicated excision, add modifier '-22')

11440- Excision, other benign lesion (unless listed elsewhere), face, ears, eyelids, nose, lips, mucous membrane; lesion diameter 0.5 cm or less

11441 lesion diameter 0.13 to 1.0 cm

11442 lesion diameter 1.1 to 2.0 cm

11443 lesion diameter 2.1 to 3.0 cm

11444 lesion diameter 3.1 to 4.0 cm

11446 lesion diameters over 4.0 cm

(For unusual or complicated excision, add modifier '-22')

(For eyelids involving more than skin, see also 67800 et seq)

11450- Excision of skin and subcutaneous tissue for hidradenitis, axillary; with simple or intermediate repair

11451 with complex repair

11462- Excision of skin and subcutaneous tissue for hidradenitis, inguinal; with simple or intermediate repair

11463 with complex repair

11470- Excision of skin and subcutaneous tissue for hidradenitis, perianal, perineal, or umbilical; with simple or intermediate repair

11411 with complex repair

(When skin graft or flap is used for closure, use appropriate procedure code in addition) (For bilateral procedure, add modifier "-50")

Excision -Malignant Lesions

Excision (including simple closure) of malignant lesion of skin or subcutaneous tissues including local anesthesia, each lesion. For removal of malignant lesions of skin *by any* method other than excision, as defined above, see destruction codes 17000-17999.

Excision is defined as full-thickness (through the dermis) removal of the following lesions and includes simple (non-layered) closure. The closure of defects created by incision, excision, or trauma may require

intermediate (layered) closure. Layered closure involves dermal closure with separate suture closure of at least one of the deeper layers of subcutaneous and non-muscle fascial tissues. (For excision of lesions requiring more than simple closure, i.e.: requiring

intermediate, complex, or reconstructive repair, see 12031-12057,13100-13160,14000-14300,15000, 15261,15570-15770)

11600- Excision, malignant lesion, trunk, arms, or leg; lesion diameter 0.5 cm or less 11601

lesion diameter 0.6 to 1.0 cm

11602 lesion diameter 1.1 to 2.0 cm

11603 lesion diameter 2.1 to 3.0 cm

11604 lesion diameter 3.1 to 4.0 cm

11606 lesion diameter over 4.0 cm

11620- Excision, malignant lesion, scalp, neck, hands, feet, genitalia; lesion diameter 0.5 cm or less

11621 lesion diameter 0.6 to 1.0 cm

11622 lesion diameter 1.1 to 2.0 cm

11623 lesion diameter 2.1 to 3.0 cm

11624 lesion diameter 3.1 to 4.0 cm

11626 lesion diameters over 4.0 cm

11640- Excision, malignant- lesion, face, ears, eyelids, nose, lips; lesion diameter 0.5 cm or less

11641 lesion diameter 0.6 to 1.0 cm

11642 lesion diameter 1.1 to 2.0 cm

11643 lesion diameter 2.1 to 3.0 cm

11644 lesion diameter 3.1 to 4.0 cm

11646 lesion diameters over 4.0 cm

(For eyelids involving more than skin, see also 67800 et seq)

Destruction

Destruction means the ablation of benign, premalignant or malignant tissues by any method, with or without curettement, including local anesthesia, and not usually requiring closure.

Any method includes electrosurgery, cryosurgery, laser and chemical treatment. Lesions include condylomata, papillomata, molluscum contagiosum herpetic lesions, warts (i.e., common, plantar, flat), milia, or other benign, premalignant (i.e., actinic keratoses), or malignant lesions.

(For destruction of lesion(s) in specific anatomic sites, see 40820, 46900-46917, 46924, 54050-54057,54065, 56501,56515,57061 ,57065,67850,68135)

(For paring or cutting of benign hyperkeratotic lesions (i.e., corns or calluses), see 11055-11057)

(For sharp removal or electrosurgical destruction of skin tags and fibrocutaneous tags, see 11200,

11201)

(For cryotherapy of acne, use 17340)

(For initiation or follow-up care of topical chemotherapy (i.e., 5-FU or similar agents), see appropriate office visits)

(For shaving of epidermal or dermal lesions, see 11300-11313)

Destruction, Benign or Premalignant Lesions

17000* - Destruction by any method, including laser, with or without surgical curettement, all benign or premalignant lesions (i.e., actinic keratoses) other than skin tags or cutaneous vascular proliferative lesions, including local anesthesia; first lesion

(117001, 17002 have been deleted. To report, see 17003,17004)

+ 17003 - Second through 14 lesions, each (List separately in addition to code for first lesion) (Use 17003 in conjunction with code 17000)

11004- Destruction by any method, including laser, with or without surgical curettement, all benign or premalignant lesions (i.e., actinic keratoses) other than skin tags or cutaneous vascular proliferative lesions, including local anesthesia, 15 or more lesions

(Do not report 17004 in conjunction with codes 17000-17003)

(17010 has been deleted. To report, see specific anatomic site code) (17100- 17105 has been deleted. To report, see 17000,17003, 170004)