CYTOPATHOLOGY SPECIMEN COLLECTION

For complete information on specimen preparation, transport, stability, and unacceptable conditions, consult individual test information in the ARUP Laboratory Test Directory.

Basic Collection Instructions

General Specimen Collection Instructions

- Prior to collecting specimen, determine tests to be ordered and consult the ARUP Laboratory Test Directory for individual test specimen volume and transport requirements.
- Collect the appropriate sample type in a quantity sufficient for the ordered test.
- Properly label the specimen with at least two patient identifiers.
- Label each slide submitted for stains with two patient identifiers.
- Specimen source is required and must be included with the test order.
- Package each specimen separately in a sealed transport bag.
- Minimize transport time.
- Ensure that the appropriate environment will be maintained between collection of specimens and delivery to the laboratory.
- Cytology fixatives include: PreservCyt, SurePath preservative fluid, Saccomanno, and 50% ethyl alcohol. This list is not all inclusive.
- Grossly bloody specimens may be fixed with CytoRich Red or CytoLyt.
- Spray fixative may be used for direct smears (holding the spray bottle approximately 8–12 inches from the slide) or they may be fixed in 95% ethyl alcohol for 10 minutes. Allow the slides to completely air dry before shipping.

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Clinical History Requirements

Because accurate interpretation is often dependent on clinical history, ARUP requires the following information to process gynecologic and non-gynecologic specimens: clinician/physician name, adequate patient identification, anatomic source and/or type of specimen, patient age or birthdate, date/time of specimen collection, and the test(s) to be performed.

For gynecologic cases, ARUP also requires the date of the patient's last menstrual period and indication of whether the patient had a previous abnormal Pap smear report, treatment, or biopsy. If patient history relating to menopause, hysterectomy, and IUD status is not provided, ARUP will contact the physician for further details if the Pap being evaluated requires that information. Other clinical history items (e.g., pregnancy, postpartum, radiation or hormone therapy) may additionally impact interpretation.

For non-gynecologic cases, clinical history, including a previous history of cancer, radiation, or chemotherapy, is also crucial to evaluation.

ANAL CYTOLOGY SPECIMENS

Cytologic screening for anal squamous intraepithelial lesions (ASIL).

Specimen	Collection Procedure
Anal	To obtain an anal sampling, moisten a Dacron swab with water, not lubricant. Insert the Dacron swab approximately 1.5–2 inches into the anal canal. It is important to use Dacron and not a cotton swab, as cells tend to cling to cotton and do not release easily into cytology collection fluids. Once inserted deep enough into the anus (necessary to collect both rectal columnar and anal squamous cells) pull the swab out, applying some pressure to the wall of the anus and rotating the swab in a spiral motion along the way.
Direct smear	The cells collected can be spread on a glass slide and immediately fixed with spray fixative or fixed in 95% ethyl alcohol for 10 minutes. Allow the slides to completely air dry before shipping.
Transport	Ambient
SurePath, Preservative fluid, or PreservCyt fixative	The preferred method of collection is in SurePath preservative fluid, although PreservCyt may also be used. After collection, thoroughly rinse and swirl the Dacron swab in the vial.
Transport	Refrigerated

BODY CAVITY FLUID SPECIMENS

Body cavity fluids are commonly evaluated for the presence of malignant cells from metastatic disease. Body cavity fluids in general are relatively easy to obtain and relatively difficult to compromise. However, in some instances, due to a large number of inflammatory cells, specimens may degenerate rapidly. In addition, if large amounts of protein are present, the specimen may clot, trapping diagnostic cells within the clot. These fluids include pleural, peritoneal, pericardial, synovial, and pelvic washing.

Specimen	Collection Procedure
Body cavity fluids	Using standard paracentesis technique, obtain a fluid specimen from the desired body cavity. If necessary, move the patient into multiple positions to suspend cellular material in the fluid. A minimum of 10 mL of specimen is recommended; 50–100 mL is optimal for cytologic evaluation. If other studies are required, withdraw a fraction of the specimen and submit it to the appropriate laboratory separately, following appropriate guidelines for specimen collection. Heparin may be added to the specimen to reduce clotting. Place three units of heparin per mL capacity of the collection container. Agitate the container to coat the sides with heparin. Rinse the paracentesis instrument with a small amount of heparin to prevent clotting of specimen before it is put into the collection container. Add specimen to the heparinized container. Gently agitate to thoroughly mix the specimen and heparin.
Pelvic washing	Using appropriate sterile technique during intra-abdominal surgery, instill a physiologic solution into the pelvic cavity. Lavage the area of interest. Aspirate the solution and place in a clean container.
Transport	Refrigerated If transport of the specimen will be delayed more than 24 hours, add an equal volume of cytology fixative (if the sample size is too large to accommodate this volume, a well-mixed aliquot of the specimen with an equal volume of cytology fixative may be utilized).

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BREAST NIPPLE SECRETION SPECIMENS

Detection of malignant cells in nipple discharge specimens.

Specimen	Collection Procedure
Nipple discharge	Collect a small amount of nipple secretion directly onto a slide. Oppose a second glass slide onto the first, allowing the collected material to provide surface tension between the two slides, and then gently and quickly pull the two slides apart in a horizontal motion to distribute the material in a thin film over both slides. The smears should be immediately fixed with spray fixative or fixed in 95% ethyl alcohol for 10 minutes. Allow the slides to completely air dry before shipping.
Transport	Ambient

CEREBROSPINAL FLUID SPECIMENS

In cytology, cerebrospinal fluid is most commonly evaluated to detect and characterize malignancy that may have gained access to the central nervous system. While CSF specimens are relatively easy to obtain in most individuals, in some individuals collection may require radiographic guidance. In addition, due to lack of nutrients in this fluid, cells may rapidly degenerate, rendering morphologic evaluation less than optimal if adequate care is not taken.

N**ote: ARUP Cytology will not process specimens from patients with known or suspected prion disease.**

Specimen	Collection Procedure
Cerebrospinal fluid	Using standard CSF procedure, collect 3 mL of CSF (10 mL CSF minimum required for immunologic marker studies). In general, morphology of cells within the CSF can be adequately maintained with prompt refrigeration for 24 hours.
Transport	Refrigerated If transport of the specimen will be delayed more than 24 hours, add an equal volume of cytology fixative.

CONJUNCTIVAL SCRAPING SPECIMENS

Detection and characterization of inflammatory/infectious processes of the conjunctiva.

Specimen	Collection Procedure
Direct smear	Place the labeled slides in a container filled with 95% ethyl alcohol so that the slides are completely covered. Gently scrape the area of abnormality. Remove one of the slides from the fixative. Quickly and evenly smear the collected material on one of the glass slides. Immediately re-immerse the slide in fixative. Repeat the process with the second slide, if necessary, for better diagnostic yield. Leave the slides in the alcohol for 10 minutes. Allow the slides to completely air dry before shipping.
Transport	Ambient

CYTOPATHOLOGY CONSULTATION

Consultation for difficult gynecologic, non-gynecologic, and fine-needle aspiration biopsy specimens is available from ARUP's board-certified cytopathologists.

Submit Pap slides, nongynecological slide preparations, special slides, and/or paraffin-embedded block, as applicable; a copy of relevant cytopathology/surgical pathology report(s); a complete clinical history; and a brief explanatory note. If special studies, such as cytogenetics, flow cytometry, PCR, FISH, EM, IHC, or IF, are required, submit additional tissue in appropriate fixative.

For additional information, contact your ARUP business development manager or ARUP Client Services.

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FINE-NEEDLE ASPIRATION SPECIMENS

Preferably, several direct smears should be prepared for all fine-needle aspiration specimens submitted to Cytopathology.

Specimen	Collection Procedure
Fine-needle aspiration	Adequate cellular material for cytologic evaluation obtained from an appropriately performed fine-needle aspiration is required. This will depend on the specimen site and character of the lesion being aspirated. In general, this requires that there be enough material for the examiner to at least determine that the aspirating needle sampled a mass lesion. **Please note that this collection procedure is a suggested guideline.** Aspiration techniques vary widely based on personal preferences, and specific clinical circumstances must be taken into account when deciding on the method of aspiration utilized. For superficial aspirates, clean technique suffices for cleansing of the skin surface. For deep aspirates, sterile technique is required for cleansing of the skin, and local anesthetic is usually required.
Direct smears	Use single-end frosted slides for the preparation of smears. Label each slide with two unique identifiers (patient name and date of birth or MRN) and the source. The method used for making the slide will be determined in part by the nature of the material present. Once the specimen is on the slide, it must be smeared. To accomplish this, oppose a second glass slide onto the first, allowing the aspirated material to provide surface tension between the two slides, then gently and quickly pull the two slides apart in a horizontal motion to distribute the material in a thin film over both slides. Slides may then be immediately fixed with spray fixative or immersed in 95% ethyl alcohol for 10 minutes. Allow the slides to completely air dry before shipping. Indicate with an "F" for fixed on the frosted end of the slide. Additional smears may also be air-dried for Diff-Quik staining. Indicate with an "A" for air-dried on the frosted end of the slide.
Needle rinse specimen	If material remains in the hub of the needle, residual may be rinsed into a tube containing cytology fixative or a physiologic solution such as normal saline or RPMI. If direct smears are not prepared, flush all aspirated material into cytology fixative or a physiologic solution.
Transport	Ambient for fixed and air-dried slides; refrigerated for unfixed fluid. If transport of specimen in fluid will be delayed more than 24 hours, the specimen should be submitted in cytology fixative.

GASTROINTESTINAL SPECIMENS

The adequacy of a gastrointestinal specimen is determined primarily by the presence of well-preserved epithelial cells indicative of the type of epithelium present at the gastrointestinal site sampled.

Specimen	Collection Procedure
Brushings (esophageal, GI junction, gastric, duodenal, bile duct, other)	Endoscopically directed brushing sample of the identified lesion: Instruct the patient to fast overnight or for a minimum of six hours prior to the procedure. Using standard endoscopy technique, identify the lesion in question and obtain a brushing sample of the lesion. It is important to brush the edges of an ulcer, as well as the floor, in order to obtain diagnostic material. Upon withdrawing the brush, agitate the brush vigorously in a 5–10 mL vial of saline or cytologic fixative. DO NOT APPLY THE BRUSH DIRECTLY TO SLIDES. If possible, detach the brush and leave it in the vial.
Washings (esophageal, gastric, other)	Endoscopically obtained washing (preferably at least 10 mL) of the region of the suspected lesion: Instruct the patient to fast overnight or for a minimum of six hours prior to the procedure. Using standard endoscopy technique, lavage the area of interest using a physiologic solution. Aspirate the solution and place in a clean specimen container.
Bile drainage	Using appropriate sterile technique, collect as much bile drainage through the drainage apparatus as possible into a clean plastic specimen container. Bile specimens will degenerate very rapidly due to enzymatic activity and bile salts. Therefore, a 24-hour bile collection is not suitable for cytologic evaluation.
Transport	Refrigerated If transport of the specimen will be delayed more than four hours, add 50 mL of cytology fixative.

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ORAL SPECIMENS

Detection and characterization of malignancy and infectious processes in the oral cavity.

Specimen	Collection Procedure
Scrapings (direct smears)	Cellular material collected from the oral mucosa is required. Place the slides in a container filled with 95% ethyl alcohol so that the slides are completely covered. Gently scrape the area of abnormality. Remove one of the slides from the fixative. Quickly and evenly smear the collected material on one of the glass slides. Immediately re-immerse the slide in fixative. Repeat the process with the second slide if necessary for better diagnostic yield. Repeat the process for additional areas if necessary.
Scrapings (normal saline or cytology fixative)	Gently scrape the area of abnormality. Thoroughly rinse the spatula in the saline or fixative. Repeat the process with a second spatula if necessary for better diagnostic yield. Repeat the process for additional areas if necessary.
Brushings	Brushing sample of the identified lesion: Brush the edges of an ulcer, as well as the floor, to obtain diagnostic material. Agitate the brush vigorously in a 5–10 mL vial of saline or cytology fixative. DO NOT APPLY THE BRUSH DIRECTLY TO SLIDES. If possible, detach the brush and leave it in the vial.
Transport	Refrigerated If transport of the specimen will be delayed more than four hours, the specimen should be submitted in cytology fixative.

PAP TESTS

A Pap test is used as a screening test for evaluation of the lower female genital tract to detect the presence of inflammatory/infectious or benign proliferative conditions; detect unsuspected or confirm suspected atypical, premalignant, or malignant changes, or to follow up with patients who have known and/or treated premalignant or malignant lesions.

To review the current Cervical Cancer Screening Recommendations, refer to http://www.arupconsult.com/Topics/CervicalCancer.html?client_ID=LTD

Please note that the Pap test is a screening test for cervical cancer and its precursors with an inherent false-negative rate.

- In premenopausal patients, obtain specimens during the second half of the menstrual period to avoid contamination by obscuring blood.
- Instruct the patient not to douche or engage in sexual intercourse within 24 hours of the procedure.
- Obtain all specimens prior to bimanual examination.
- Place the patient in the lithotomy position. Using an unlubricated vaginal speculum (saline may be used as a lubricant) visualize the cervix as fully as possible.
- Vaginal discharge or secretion, when present in large amounts, should be removed before obtaining the cervical sample so as not to disturb the epithelium (i.e., cellulose swab). Small amounts of blood will not interfere with the cytologic evaluation; however, large amounts of blood as present during menses may interfere with cytologic evaluation because cells may be obscured by blood. Use of liquid-based specimen collection minimizes the interference from these factors. If testing for sexually transmitted disease is indicated, the cervical cytology sample should be taken first.
- Vaginal specimens can be used in conjunction with routine cervical/endocervical smears in individuals with a uterus, or alone in hysterectomized patients. If a vaginal specimen will be obtained in conjunction with a cervical and endocervical component, make sure that the slides or vials are also appropriately labeled according to site. If specimens from separate vaginal areas are also obtained, label the sites accordingly with specific site (e.g., left lateral vaginal wall, posterior vaginal wall).
- Vaginal specimens may be submitted for evaluation of potential changes associated with in utero DES exposure. After visualization of the upper one-third of the vagina is accomplished, use the spatula to scrape the upper one-third of either lateral vaginal wall (LVW). Withdraw the spatula and spread the material quickly and evenly onto a slide or submit the specimen in liquid-based Pap test preservative fluid clearly marked "LVW."
- Follow the instructions for the specific collection kit used.

Pap Tests continued on next page

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Specimen	Collection Procedure
Conventional Pap smear cervical/ endocervical	After visualization of the cervix is accomplished, insert the cytobrush into the endocervical canal and rotate half a turn. Withdraw the cytobrush and spread the collected material quickly and evenly onto the half of the slide opposite the frosted end. The endocervical mucus will prevent air-drying during collection of the subsequent cervical component. Using the extended-tip spatula, scrape material with the spatula from the whole circumference of the cervix. Withdraw the spatula and spread the collected material quickly and evenly onto the half of the slide adjacent to the frosted end. The smear(s) should be immediately fixed with spray fixative or fixed in 95% ethyl alcohol for 10 minutes. Allow the slides to completely air dry before shipping.
Vaginal	Scrape the desired region of the vaginal mucosa with the spatula. Withdraw the spatula and spread the material quickly and evenly onto the glass slide. The smear(s) should be immediately fixed with spray fixative or fixed in 95% ethyl alcohol for 10 minutes. Allow the slides to completely air dry before shipping. Scrape additional areas of the vagina that appear abnormal and spread and fix as noted above.
Vaginal, DES exposure	For evaluation of potential changes associated with in utero DES exposure. After visualization of the upper one-third of the vagina is accomplished, use the spatula to scrape the upper one-third of either lateral vaginal wall. Withdraw the spatula and spread the material quickly and evenly onto a slide clearly marked "LVW." The smear(s) should be immediately fixed with spray fixative or fixed in 95% ethyl alcohol for 10 minutes. Allow the slides to completely air dry before shipping. Scrape additional areas of the vagina that appear abnormal. Label the slides accordingly, and spread and fix as noted above.
Transport	Ambient
SurePath liquid-based Pap test Rovers Cervex-Brush collection (kit #22216)	Position the tip of the longer bristles into the cervical os/endocervical canal. Begin rotating in a clockwise direction (one-quarter to one-half turn). The bristles will begin to stiffen. Continue rotating in a clockwise direction and gently push towards the cervix until the shorter bristles begin to bend extending over the ectocervix. Complete five 360-degree rotations. Direction must be consistent. Do not alter or vary the direction of the broom during sampling. Transfer the entire sample by placing your thumb against the back of the brush pad and disconnect the entire brush from the stem into the preservative vial. Recap the preservative vial and tighten. **Contraindication: Do not use on pregnant patients after the first 10 weeks of gestation.**
SurePath liquid-based Pap test Medscand Pap-Perfect plastic spatula and Cytobrush Plus GT collection (kit #41126)	Insert the contoured end of the Pap-Perfect plastic spatula and rotate 360 degrees around the entire exocervix. Disconnect the spatula head and place it into the vial. Insert the Cytobrush Plus GT into the endocervix until only the bottommost fibers are exposed at the cervical os. Slowly rotate or turn one-half turn in one direction. To reduce unnecessary bleeding, do NOT over rotate. Disconnect the brush head and place in the preservative vial. Recap the preservative vial and tighten. **Contraindication: Do not use the Cytobrush Plus GT (endocervical brush) on pregnant patients or for endometrial sampling.**
SurePath liquid-based Pap test Rovers Cervex-Brush combi collection (kit #45031)	Insert central bristles into the endocervical canal. Use gentle pressure on the cervix until the lateral bristles bend against the ectocervix. Maintain gentle pressure and rotate two times in a clockwise direction by rolling the stem between the thumb and forefinger. Disconnect the brush head and place in the preservative vial. Recap the preservative vial and tighten. **Contraindication: This device should not be used during pregnancy.**
Transport	Refrigerated
ThinPrep Pap test Broom (kit #12587)	Insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix. Push gently, and rotate the broom in a clockwise direction five times. Rinse the broom-type collection device as quickly as possible into the PreservCyt solution vial by pushing the broom into the bottom of the vial 10 times, forcing the bristles apart. As a final step, swirl the collection device vigorously to further release material. Discard the collection device. Tighten the cap so the torque line on the cap passes the torque line on the vial.
ThinPrep Pap test Brush/spatula (kit #40624)	Obtain an adequate sampling from the ectocervix using a plastic spatula. Rinse the spatula as quickly as possible into the PreservCyt solution vial by swirling the spatula vigorously in the vial 10 times. Discard the spatula. Insert the brush into the cervix until only the bottommost fibers are exposed. Slowly rotate or turn one-half turn in one direction. DO NOT OVER-ROTATE. Rinse the brush as quickly as possible in the PreservCyt solution by rotating the device in the solution while pushing against the vial wall. Swirl the brush vigorously to further release material. Discard the brush. Tighten the cap so the torque line on the cap passes the torque line on the vial.
Transport	Ambient

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PULMONARY SPECIMENS

The adequacy of a sputum specimen is determined primarily by the presence of alveolar macrophages, which indicate that the specimen obtained is a deep cough specimen producing material from the lower airways. In addition, the specimen should not be obscured by oral or upper airway contaminants. Adequate bronchial brushing and washing specimens should contain large numbers of well-preserved bronchial lining cells, with as little contaminating oral and upper airway material as possible.

Specimen	Collection Procedure
Bronchial brushings	Bronchoscopically directed brushing of the identified lesion: Using standard bronchoscopy technique, identify the lesion in question and obtain a brushing sample of the lesion. Upon withdrawing the brush, agitate the brush vigorously in a 5–10 mL vial of sterile saline or cytology fixative. DO NOT APPLY THE BRUSH DIRECTLY TO SLIDES. If possible, detach the brush and leave it in the vial.
Bronchial washings	Bronchoscopically obtained washing (10 mL is preferred) of the bronchi in the region of the suspected lesion. Using standard bronchoscopy technique, lavage the area of the bronchus to be sampled. Collect the wash in a clean container.
Bronchoalveolar lavage	Using standard bronchoscopy BAL technique, lavage the lung area in question with sterile, normal saline (or other physiologic solution). Collect the lavage specimen in a clean specimen container. BAL specimens sent for culture MUST be split from the main specimen prior to transport. The Cytopathology Laboratory does not have facilities for the sterile handling of BAL specimens necessary for culture procedures.
Sputum	When clinically feasible, obtain 5 mL of sputum (about one teaspoon) or more if possible, from a deep cough specimen. The optimum time for specimen collection is within 15–30 minutes of waking and before eating breakfast. Brushing of teeth or rinsing of the mouth thoroughly with water will reduce contamination by saliva. Instruct the patient to inhale and exhale deeply, forcing air from the lungs using the diaphragm. Repeat until the patient coughs and is able to produce a sputum specimen. Collect the specimen in the container, attempting to obtain at least one teaspoon of sputum. Specimen should be a deep cough specimen and not saliva. Saliva is of no diagnostic value. Greater diagnostic yield may be obtained if specimens are submitted on three to five successive mornings. If a good specimen is not obtainable by this method, or if the patient is unable to comply, obtain an induced sputum or tracheal aspirate. The Cytopathology Laboratory will not accept induced or any other sputum samples for the cytologic detection of *Pneumocystis jiroveci*, fungi, or acid-fast bacilli.
Post-bronchoscopy sputum	Collect one good, deep cough specimen at any time during the 24-hour period following bronchoscopy, as outlined above.
Transport	Refrigerated If transport of the specimen will be delayed more than 24 hours, add 50 mL of cytology fixative.

SKIN SCRAPING SPECIMENS

Detection and characterization of inflammatory/infectious processes of the skin, especially herpetic infections (Tzanck smear).

Specimen	Collection Procedure
Skin lesion, usually a vesicle	Place the labeled slide in a container filled with 95% ethyl alcohol so the slides are completely covered. Gently scrape the area of abnormality. If the abnormality is a vesicle, remove the covering and scrape both at the base of the vesicle and around the rim. Remove one of the slides from the fixative. Quickly and evenly smear the collected material on one of the glass slides. Immediately re-immerse the slide in fixative. Repeat the process with the second slide, if necessary, for better diagnostic yield. Repeat the process for additional areas if necessary. After collection, leave the slides in the alcohol for 10 minutes. Allow the slides to completely air dry before shipping.
Transport	Ambient

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UROLOGIC SPECIMENS

Urine is commonly evaluated cytologically for the presence of malignant cells in the detection of urologic malignancies. Urine may also be evaluated cytologically in the detection and characterization of some renal diseases. Method of specimen collection, as well as time of collection, will affect the cytologic evaluation in many instances.

Specimen	Collection Procedure
Voided/ catheterized urine	For purposes of obtaining the greatest yield of diagnostic material, a second-morning voided urine specimen should be obtained if possible. A midstream, clean-catch specimen is recommended to avoid vaginal contamination in female patients. A midstream specimen, not necessarily clean catch, is recommended for male patients. If the patient must be catheterized to obtain the specimen, note this on the submission, as catheterization can lead to artifacts that may be misinterpreted if it's not known that the specimen was catheterized.
Other urologic specimens obtained cystoscopically (i.e., bladder washing, renal pelvis washing/brushing, ureteral washing/brushing, or urethral washing)	
Washing	Using standard cystoscopy technique, obtain washing specimens carefully, denoting specific specimen sites for each specimen.
Brushing	Using standard cystoscopy technique, identify the lesion in question and obtain a brushing sample of the lesion. Brush the edges of an ulcer, as well as the floor, to obtain diagnostic material. Upon withdrawing the brush, agitate the brush vigorously in a 5–10 mL vial of saline or cytology fixative. DO NOT APPLY THE BRUSH DIRECTLY TO SLIDES. If possible, detach the brush and leave it in the vial
Transport	Refrigerated If transport of the specimen will be delayed more than four hours, the specimen should be submitted in cytology fixative.

UROVYSION FISH SPECIMENS

The UroVysion Bladder Cancer Kit (UroVysion kit) is designed to detect aneuploidy for chromosomes 3, 7, and 17, as well as loss of the 9p21 locus, via fluorescence in situ hybridization (FISH) in urine specimens from persons with hematuria suspected of having bladder cancer. Results from the UroVysion Kit are intended for use—in conjunction with and not in lieu of current standard diagnostic procedures—as an aid for initial diagnosis of bladder carcinoma in patients with hematuria and subsequent monitoring for tumor recurrence in patients previously diagnosed with bladder cancer.

Specimen	Collection Procedure
Collection kit	ThinPrep UroCyte Urine Collection Kit (UroVysion FISH Collection Kit #41440), PreservCyt, Saccomanno fixative
Voided urine	Collect minimum of 35 mL voided urine. For purposes of obtaining the greatest yield of diagnostic material, a second-morning, clean-catch voided urine specimen should be collected if possible. Collect the urine in the blue-capped specimen collection cup. If urine exceeds 60mL, pour off the excess into a second specimen collection cup. Carefully pour the entire contents of the PreservCyt solution into the specimen collection cup(s) containing urine. Tightly secure the blue cap on the specimen collection cup. Keep turning until you hear the audible click. Alternatively, if you do not have a collection kit, urine can be collected and mixed two parts urine to one part PreservCyt or Saccomanno fixative.
Transport	Refrigerated

VITREOUS FLUID SPECIMENS

In cytology, vitreous fluid is most commonly evaluated to detect and characterize malignancy that may have gained access to the eye. Vitreous fluid specimens require special collection procedures under the direction of an ophthalmologist. In addition, due to lack of nutrients in this fluid, cells may rapidly degenerate, rendering morphologic evaluation less than optimal if adequate care is not taken.

Specimen	Collection Procedure
Vitreous fluid	Using standard vitreous collection procedures, collect an appropriate amount of vitreous fluid. There is no minimum amount, but collect as much as possible.
Transport	Refrigerated If transport of the specimen will be delayed more than 24 hours, add an equal volume of cytology fixative. Specimens submitted for immunocytochemical testing must be submitted fresh.

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