Standards and Guidelines for the Accreditation of Educational Programs in Cytotechnology

Essentials/Standards initially adopted in 1962;
Revised in 1967, 1977, 1983, 1992, 1998, 2004 and 2013 by the:

American Society of Cytopathology
American Society for Clinical Pathology
American Society for Cytotechnology
College of American Pathologists
Cytotechnology Programs Review Committee
Commission on Accreditation of Allied Health Education Programs

The Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredits programs upon the recommendation of the Cytotechnology Programs Review Committee (CPRC).

These accreditation **Standards and Guidelines** are the minimum standards of quality used in accrediting programs that prepare individuals to enter the Cytotechnology profession. Standards are the minimum requirements to which an accredited program is held accountable. Guidelines are descriptions, examples, or recommendations that elaborate on the Standards. Guidelines are not required, but can assist with interpretation of the Standards.

Standards are printed in regular typeface in outline form. *Guidelines* are printed in italic typeface in narrative form.

Preamble
The Commission on Accreditation of Allied Health Education Programs (CAAHEP), the Cytotechnology Programs Review Committee (CPRC), the American Society of Cytopathology, the American Society for Clinical Pathology, the American Society for Cytotechnology, and the College of American Pathologists cooperate to establish, maintain and promote appropriate standards of quality for educational programs in Cytotechnology and to provide recognition for educational programs that meet or exceed the minimum standards outlined in these accreditation **Standards and Guidelines**. Lists of accredited programs are published for the information of students, employers, educational institutions and agencies, and the public.

These **Standards and Guidelines** are to be used for the development, evaluation, and self-analysis of Cytotechnology programs. On-site review teams assist in the evaluation of a program's relative compliance with the accreditation Standards.

Description of the Profession
Cytotechnology is an allied health specialty that involves the evaluation of cellular material from all body sites. Paramount to the cytotechnologist is the recognition of normal and abnormal cytology including, but not limited to, malignant neoplasms, precancerous lesions, infectious agents and inflammatory processes in gynecologic, non-gynecologic and fine needle aspiration specimens. The cytotechnologist must possess the technical skills for a wide variety of cytologic laboratory specimen preparations and a basic knowledge of contemporary procedures and emerging technologies.

I. Sponsorship

A. Sponsoring Institution

A sponsoring institution must be at least one of the following:

1. A post-secondary academic institution accredited by an institutional accrediting agency that is recognized by the U.S. Department of Education, and authorized under applicable law or other acceptable authority to provide a post-secondary program, which awards a minimum of a certificate at the completion of the program.
2. A hospital or medical center laboratory accredited by an applicable recognized agency, which awards a minimum of a certificate at the completion of the program.
3. A branch of the United States Armed Forces, which awards a minimum of a certificate at the completion of the program.

B. Consortium Sponsor

1. A consortium sponsor is an entity consisting of two or more members that exists for the purpose of operating an educational program. In such instances, at least one of the members of the consortium must meet the requirements of a sponsoring institution as described in I.A.
2. The responsibilities of each member of the consortium must be clearly documented in a formal affiliation agreement or memorandum of understanding, which includes governance and lines of authority.

C. Responsibilities of Sponsor

1. The Sponsor must ensure that the provisions of these **Standards and Guidelines** are met.
2. The Sponsor must ensure that the graduates of the program have obtained or will obtain a minimum of a baccalaureate degree upon completion of the program.

II. Program Goals

A. Program Goals and Outcomes

There must be a written statement of the program's goals and learning domains consistent with and responsive to the demonstrated needs and expectations of the various communities of interest served by the educational program. The communities of interest that are served by the program must include, but are not limited to, students, graduates, faculty, sponsor administration, employers, physicians, and the public.

Program-specific statements of goals and learning domains provide the basis for program planning, implementation, and evaluation. Such goals and learning domains must be compatible with the mission of the sponsoring institution(s), the expectations of the communities of interest, and nationally accepted standards of roles and functions. Goals and learning domains are based upon the substantiated needs of health care providers and employers, and the educational needs of the students served by the educational program.

Needs may be demonstrated by a market survey or a meeting of the communities of interest. Based on this needs assessment, a plan should be established to meet market demands, including an expected level of student admissions.

B. Appropriateness of Goals and Learning Domains

The program must regularly assess its goals and learning domains. Program personnel must identify and respond to changes in the needs and/or expectations of its communities of interest.

An advisory committee, which is representative of at least each of the communities of interest named in these Standards, must be designated and charged with the responsibility of meeting at least annually, to assist program and sponsor personnel in formulating and periodically revising

appropriate goals and learning domains, monitoring needs and expectations, and ensuring program responsiveness to change.

The program should provide documentation that an advisory committee has been established for the required purposes. Documentation should include the advisory committee's composition, mission, goals and functions in relation to the program, and findings of the community needs assessment, the conclusions drawn and a plan to implement changes to meet new needs and address complaints, if any.

C. Minimum Expectations

The program must have the following goal defining minimum expectations: "To prepare competent entry-level cytotechnologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains."

Programs adopting educational goals beyond entry-level competence must clearly delineate this intent and provide evidence that all students have achieved the basic competencies prior to entry into the field.

Nothing in this Standard restricts programs from formulating goals beyond entry-level competence.

III. Resources

A. Type and Amount

Program resources must be sufficient to ensure the achievement of the program's goals and outcomes. Resources must include, but are not limited to: faculty; clerical and support staff; curriculum; finances; offices; classroom, laboratory, and, ancillary student facilities; clinical affiliates; equipment; supplies; computer resources; instructional reference materials, and faculty/staff continuing education.

Clerical/Support Staff

The number of clerical and support staff should be sufficient to ensure that program officials and faculty are able to have, as their primary focus, the education of students.

Financial

Program officials should have input into the budgetary process.

Facilities

Each student should be provided an assigned desk or study area within a properly ventilated learning area with adequate space to evaluate and study cytologic material; the laboratory area for the preparation and staining of slides should be large enough to accommodate students and designated laboratory personnel; space should be provided for preparation of lectures, storage of student records, private conferences with individual students and other administrative duties.

Equipment/Supplies

Instructional aids should include clinical specimens, records, related reference materials, computer hardware and software, and audio and visual resources.

Adequate equipment/supplies should include one properly functioning microscope per student, a multi-viewer microscopic system, and sufficient numbers of marked (study sets) and unmarked (unknowns) slides of normal and abnormal specimens from all body sites examined by cytologic methods.

Study sets should reflect a diversity of body sites and diagnostic entities in sufficient numbers to provide appropriate exposure to common and unusual malignant and non-malignant processes. Other goals for study sets include appropriate history and clinical information and selected examples

of confirmatory histologic material and appropriate supplementary stains. Exposure to a diversity of collection and preparation techniques is also encouraged.

To provide students with an adequate learning experience to meet entry level competencies, the following caseloads are recommended as a minimum: an annual gynecologic caseload of 3,700 cases per student per year with a 5% or greater abnormal rate and an annual non-gynecologic caseload of 250 cases per student per year, of which 20% should be fine needle aspiration (FNA) cases, reflecting a diversity of body sites and diagnostic entities. Programs with caseloads less than any of the above recommendations may achieve a comparable learning experience through the use of adequate numbers of study sets and unknown test slides to supplement current caseload experience. If affiliated laboratories are used, their volume of material may be included for both gynecologic and non-gynecologic specimens.

Faculty/Staff Continuing Education
Professional development may be documented by listing programs attended or presented, giving the titles, sponsor and dates for each program; continuing education credits earned, including in-service programs or academic coursework pursued (or equivalent through recognized agencies recording continuing education); papers published; and research conducted.

B. Personnel

The sponsor must appoint sufficient faculty and staff with the necessary qualifications to perform the functions identified in documented job descriptions and to achieve the program's stated goals and outcomes.

Program officials should be able to document that they have sufficient time from other responsibilities to accomplish the day-to-day teaching, educational and administrative duties of their positions. That time may be documented through detailed job descriptions, mutual agreements written and signed by program officials, or other comparable documents.

1. Program Director

a. Responsibilities
The Program Director must be responsible for program organization, administration, continuous quality improvement, curriculum planning and development, student assessments, instruction, evaluating and directing other program faculty/staff, and ensuring compliance with accreditation standards.

b. Qualifications
The Program Director must possess, at minimum, the following:
(1) Certification as a Cytotechnologist with a Masters degree or certification as a Specialist in Cytotechnology;
(2) 3 years professional experience within the past 5 years;
(3) Competence in the area of diagnostic cytopathology;
(4) Competence in the area of educational theory or practice; and
(5) 2 years teaching experience.

Persons approved as Program Director under previous **Standards** will continue to be approved in that position at that institution provided on-going competence is demonstrated.

Professional experience should include functioning as staff/supervisory cytotechnologist and/or cytotechnology educator.

Ongoing competence in the area of diagnostic cytopathology should include continuous education in topics such as diagnostic cytopathology, molecular pathology, lab safety, principles of management, principles of education or other related laboratory areas of interest.

Ongoing competence in the area of education theory or practice should include continuous education in topics in the principles of education, such as critical thinking, learning domains, testing and evaluation, theories and concepts of adult learning, curriculum design, learning styles, lesson plans, and research.

Teaching experience should be within the past 5 years and may be demonstrated by preparation and/or presentation of cytopathology workshops, scientific sessions or teleconferences; faculty rank at a university; teaching of residents; preparation and presentation of lectures or in-service seminars; instruction at the microscope; authorship of exams, computer-aided instruction, course objectives or other educational materials.

2. Medical Director(s) or Medical Advisor(s)

a. Responsibilities
The Medical Director(s) or Medical Advisor(s) must actively participate in the program to provide instruction, guidance and support, and must ensure that the medical content of the curriculum reflects current practice standards.

b. Qualifications
The Medical Director(s) or Medical Advisor(s) must possess, at minimum, the following:

(1) License as a physician;
(2) Board certification as an anatomic pathologist;
(3) 3 years professional experience within the past 5 years;
(4) Competence in the area of diagnostic cytopathology; and
(5) Competence in the area of education.

Persons approved as Medical Director or Medical Advisor under previous **Standards** will continue to be approved in that position at that institution provided on-going competence is demonstrated.

Active participation in the program includes preparation and delivery of lectures and microscopic review of cases with students. Under the supervision of the medical director(s), teaching responsibilities may be assigned to other personnel.

Ongoing competence in the area of diagnostic cytopathology should include continuous education in topics such as diagnostic cytopathology, molecular pathology, lab safety, principles of management, principles of education or other related laboratory areas of interest.

Ongoing competence in the area of education theory or practice should include continuous education in topics in the principles of education, such as critical thinking, learning domains, testing and evaluation, theories and concepts of adult learning, curriculum design, learning styles, lesson plans, and research.

3. Education Coordinator

a. Responsibilities
Under the direction of the Program Director, the Education Coordinator must coordinate and schedule student activities, provide instruction as appropriate, assist in conducting student assessments, coordinate clinical affiliations, and provide day-to-day supervision of students.

b. Qualifications
The Education Coordinator must, at minimum, possess
(1) Board certification as a cytotechnologist with a baccalaureate degree;
(2) 3 years professional experience within the past 5 years;
(3) Competence in the area of diagnostic cytopathology;

(4) Competence in educational theory or practice; and
(5) 1 year teaching experience.

Persons approved as Education Coordinator under previous **Standards** continue to be approved in that position at that institution provided on-going competence is demonstrated.

The Program Director may also serve as Education Coordinator. The position of Education Coordinator may be shared by more than one person, each meeting the above qualifications.

Ongoing competence in the area of diagnostic cytopathology should include continuous education in topics such as diagnostic cytopathology, molecular pathology, lab safety, principles of management, principles of education or other related laboratory areas of interest.

Ongoing competence in the area of education theory or practice should include continuous education in topics in the principles of education, such as critical thinking, learning domains, testing and evaluation, theories and concepts of adult learning, curriculum design, learning styles, lesson plans, and research.

Teaching experience should be within the past 5 years and may be demonstrated by preparation and/or presentation of cytopathology workshops, scientific sessions or teleconferences; faculty rank at a university; teaching of residents; preparation and presentation of lectures or in-service seminars; instruction at the microscope; authorship of exams, computer-aided instruction, course objectives or other educational materials.

4. Faculty and/or Instructional Staff

a. Responsibilities
In each location where a student is assigned for didactic or supervised practical instruction, there must be a qualified individual designated to provide that supervision and related frequent assessments of the students' progress in achieving acceptable program requirements.

b. Qualifications
The instructors must be knowledgeable in course content and effective in teaching their assigned subjects. For the clinical component of the program, instructors must be certified cytotechnologists, pathologists, or appropriately qualified for their respective teaching responsibilities.

C. Curriculum

The curriculum must ensure the achievement of program goals and learning domains. Instruction must be an appropriate sequence of classroom, laboratory, and clinical activities. Instruction must be based on clearly written course syllabi that include course description, course objectives, methods of evaluation, topic outline, and competencies required for graduation.

The program must demonstrate by comparison that the curriculum offered meets or exceeds the "Cytotechnology Curriculum Entry Level Competencies" listed in Appendix B of these ***Standards and Guidelines***.

The program should provide education and training to the student in cytotechnology for a career in that field and gainful employment, without regard to the specific needs of the laboratory or institution providing training.

D. Resource Assessment

The program must, at least annually, assess the appropriateness and effectiveness of the resources described in these **Standards**. The results of resource assessment must be the basis for ongoing planning and appropriate change. An action plan must be developed when

deficiencies are identified in the program resources. Implementation of the action plan must be documented and results measured by ongoing resource assessment.

IV. Student and Graduate Evaluation / Assessment

A. Student Evaluation

1. Frequency and purpose
   Evaluation of students must be conducted on a recurrent basis and with sufficient frequency to provide both the students and program faculty with valid and timely indications of the students' progress toward and achievement of the competencies and learning domains stated in the curriculum.

2. Documentation
   Records of student evaluations must be maintained in sufficient detail to document learning progress and achievements.

Evaluation systems should include appropriate written, practical and/or oral examinations that should be based on course objectives and learning domains. Evaluation forms based on objective criteria should be used to evaluate the performance of students at the microscope. Records of performance on formal practicals, laboratory exercises and microscopic evaluations of daily specimens should be detailed, complete and available for student review. In addition to indicating students' progress, evaluation methods should serve as a reliable indicator of the effectiveness of course design and instruction. Criteria for pass/fail should be provided to students in writing prior to beginning the particular segment of the curriculum.

B. Outcomes

1. Outcomes Assessment

The program must periodically assess its effectiveness in achieving its stated goals and learning domains. The results of this evaluation must be reflected in the review and timely revision of the program.

Outcomes assessments must include, but are not limited to: national credentialing examination(s) performance, programmatic retention/attrition, graduate satisfaction, employer satisfaction, job (positive) placement, and programmatic summative measures. The program must meet the outcomes assessment thresholds.

"Positive placement" means that the graduate is employed full or part-time in a related field; and/or continuing his/her education; and/ or serving in the military.

2. Outcomes Reporting

The program must periodically submit to the CPRC the program goal(s), learning domains, evaluation systems (including type, cut score, and appropriateness), outcomes, its analysis of the outcomes, and an appropriate action plan based on the analysis.

Programs not meeting the established thresholds must begin a dialogue with the CPRC to develop an appropriate plan of action to respond to the identified shortcomings.

V. Fair Practices

A. Publications and Disclosure

1. Announcements, catalogs, publications, and advertising must accurately reflect the program offered.

2. At least the following must be made known to all applicants and students: the sponsor's institutional and programmatic accreditation status as well as the name, mailing address, web site address, and phone number of the accrediting agencies; admissions policies and practices, including technical standards (when used); policies on advanced placement,

transfer of credits, and credits for experiential learning; number of credits required for completion of the program; tuition/fees and other costs required to complete the program; policies and processes for withdrawal and for refunds of tuition/fees.

Information relating to scholarships, education grants, financial assistance awards or loans, or other tuition assistance programs, whether or not related to subsequent employment after completion of the program, should be accurate, published, and available to all applicants and students.

3. At least the following must be made known to all students: academic calendar, student grievance procedure, criteria for successful completion of each segment of the curriculum and for graduation, and policies and processes by which students may perform clinical work while enrolled in the program.

Confidentiality should be maintained in dealing with student grievances. The appeals process should include descriptions of the causes for dismissal, procedures and policies of the institution, and criteria for academic probation. It is desirable that resolution of a problem should include impartial parties, preferably non-program officials, in cases in which a grievance cannot be resolved within the program.

4. The sponsor must maintain, and make available to the public, current and consistent summary information about student/graduate achievement that includes the results of one or more of the outcomes assessments required in these **Standards**.

The sponsor should develop a suitable means of communicating to the communities of interest the achievement of students/graduates (e.g. through a website or electronic or printed documents).

B. Lawful and Non-discriminatory Practices

All activities associated with the program, including student and faculty recruitment, student admission, and faculty employment practices, must be non-discriminatory and in accord with federal and state statutes, rules, and regulations. There must be a faculty grievance procedure made known to all paid faculty.

C. Safeguards

The health and safety of patients, students, and faculty associated with the educational activities of the students must be adequately safeguarded.

All activities required in the program must be educational and students must not be substituted for staff.

The program should establish a procedure for determining that the students' health will permit them to meet the technical standards of the program. Students should submit evidence of good health. Students may be required to provide their own health insurance coverage. Students should receive instruction in biohazard precautions.

D. Student Records

Satisfactory records must be maintained for student admission, advisement, counseling, and evaluation. Grades and credits for courses must be recorded on the student transcript and permanently maintained by the sponsor in a safe and accessible location.

The following records should be maintained for at least 7 years for each student:

1. *Attendance record*
2. *Records of performance on tests, microscopic evaluations, clinical rotations, and other assignments*
3. *Staff evaluations of students' professional attitude and participation in the program*

4. *Documents of suspension, leaves of absence, probation or withdrawal, if any*
5. *Records of scholarships, awards, or citations, if any*
6. *Record of graduation*

E. Substantive Change

The sponsor must report substantive change(s) as described in Appendix A to CAAHEP/CPRC in a timely manner. Additional substantive changes to be reported to the CPRC within the time limits prescribed include:

1. Change in institution's legal status or form of control;
2. Change/addition/deletion of courses that represent significant departure in curriculum content;
3. Change in method of curriculum delivery;
4. Change in the degree or credential awarded;
5. Substantial increase/decrease in clock or credit hours for successful completion of a program; and
6. Change in student capacity.

F. Agreements

There must be a formal affiliation agreement or memorandum of understanding between the sponsor and all other entities that participate in the education of the students describing the relationship, roles, and responsibilities of the sponsor and that entity.

APPENDIX A

Application, Maintenance and Administration of Accreditation

A. Program and Sponsor Responsibilities

1. Applying for Initial Accreditation

a. The chief executive officer or an officially designated representative of the sponsor completes a "Request for Accreditation Services" form and returns it electronically or by mail to:

Cytotechnology Programs Review Committee
c/o American Society of Cytopathology
100 West 10th Street, Suite 605
Wilmington, DE 19801

The "Request for Accreditation Services" form can be obtained from the CAAHEP website at www.caahep.org/Content.aspx?ID=11.

Note: There is **no** CAAHEP fee when applying for accreditation services; however, individual committees on accreditation may have an application fee.

b. The program undergoes a comprehensive review, which includes a written self-study report and an on-site review.

The self-study instructions and report form are available from the Cytotechnology Programs Review Committee. The on-site review will be scheduled in cooperation with the program and Cytotechnology Programs Review Committee once the self-study report has been completed, submitted, and accepted by the Cytotechnology Programs Review Committee.

2. Applying for Continuing Accreditation

a. Upon written notice from the CPRC, the chief executive officer or an officially designated representative of the sponsor completes a "Request for Accreditation Services" form, and returns it electronically or by mail to:

Cytotechnology Programs Review Committee
c/o American Society of Cytopathology
100 West 10th Street, Suite 605
Wilmington, DE 19801.

The "Request for Accreditation Services" form can be obtained from the CAAHEP website at www.caahep.org/Content.aspx?ID=11.

b. The program may undergo a comprehensive review in accordance with the policies and procedures of the CPRC.

If it is determined that there were significant concerns with the conduct of the on-site review, the sponsor may request a second site visit with a different team.

After the on-site review team submits a report of its findings, the sponsor is provided the opportunity to comment in writing and to correct factual errors prior to the Cytotechnology Programs Review Committee forwarding a recommendation to CAAHEP.

3. Administrative Requirements for Maintaining Accreditation

a. The program must inform the Cytotechnology Programs Review Committee and CAAHEP within a reasonable period of time (as defined by the committee on accreditation and CAAHEP policies) of changes in chief executive officer, dean of health professions or equivalent position, and required program personnel (Refer to Standard III.B.).

b. The sponsor must inform CAAHEP and the CPRC of its intent to transfer program sponsorship. To begin the process for a Transfer of Sponsorship, the current sponsor must submit a letter (signed by the CEO or designated individual) to CAAHEP and the Cytotechnology Programs Review Committee that it is relinquishing its sponsorship of the program. Additionally, the new sponsor must submit a "Request for Transfer of Sponsorship Services" form. The Cytotechnology Programs Review Committee has the discretion of requesting a new self-study report with or without an on-site review. Applying for a transfer of sponsorship does not guarantee that the transfer of accreditation will be granted.

c. The sponsor must promptly inform CAAHEP and the Cytotechnology Programs Review Committee of any adverse decision affecting its accreditation by recognized institutional accrediting agencies and/or state agencies (or their equivalent).

d. Comprehensive reviews are scheduled by the CPRC in accordance with its policies and procedures. The time between comprehensive reviews is determined by the Cytotechnology Programs Review Committee and based on the program's on-going compliance with the Standards, however, all programs must undergo a comprehensive review at least once every ten years.

e. The program and the sponsor must pay Cytotechnology Programs Review Committee and CAAHEP fees within a reasonable period of time, as determined by the Cytotechnology Programs Review Committee and CAAHEP respectively.

f. The sponsor must file all reports in a timely manner (self-study report, progress reports, probation reports, annual reports, etc.) in accordance with CPRC policy.

g. The sponsor must agree to a reasonable on-site review date that provides sufficient time for CAAHEP to act on a CPRC accreditation recommendation prior to the "next comprehensive review" period, which was designated by CAAHEP at the time of its last accreditation action, or a reasonable date otherwise designated by the CPRC.

Failure to meet any of the aforementioned administrative requirements may lead to administrative probation and ultimately to the withdrawal of accreditation. CAAHEP will immediately rescind administrative probation once all administrative deficiencies have been rectified.

4. Voluntary Withdrawal of a CAAHEP- Accredited Program

Notification of voluntary withdrawal of accreditation from CAAHEP must be made by the Chief Executive Officer or an officially designated representative of the sponsor by writing to CAAHEP indicating: the desired effective date of the voluntary withdrawal, and the location where all records will be kept for students who have completed the program.

5. Requesting Inactive Status of a CAAHEP- Accredited Program

Inactive status for any accredited program other than one holding Initial Accreditation may be requested from CAAHEP at any time by the Chief Executive Officer or an officially designated representative of the sponsor writing to CAAHEP indicating the desired date to become inactive. No students can be enrolled or matriculated in the program at any time during the time period in which the program is on inactive status. The maximum period for inactive status is two years. The sponsor must continue to pay all required fees to the Cytotechnology Programs Review Committee and CAAHEP to maintain its accreditation status.

To reactivate the program the Chief Executive Officer or an officially designated representative of the sponsor must provide notice of its intent to do so in writing to both CAAHEP and the Cytotechnology Programs Review Committee. The sponsor will be notified by the Cytotechnology Programs Review Committee of additional requirements, if any, that must be met to restore active status.

If the sponsor has not notified CAAHEP of its intent to re-activate a program by the end of the two-year period, CAAHEP will consider this a "Voluntary Withdrawal of Accreditation."

B. CAAHEP and Committee on Accreditation Responsibilities – Accreditation Recommendation Process

1. After a program has had the opportunity to comment in writing and to correct factual errors on the on-site review report, the Cytotechnology Programs Review Committee forwards a status of public recognition recommendation to the CAAHEP Board of Directors. The recommendation may be for any of the following statuses: initial accreditation, continuing accreditation, transfer of sponsorship, probationary accreditation, withhold of accreditation, or withdrawal of accreditation.

   The decision of the CAAHEP Board of Directors is provided in writing to the sponsor immediately following the CAAHEP meeting at which the program was reviewed and voted upon.

2. Before the Cytotechnology Programs Review Committee allows the Initial Accreditation of a program to expire, the sponsor must have the opportunity to request reconsideration of that decision or to request voluntary withdrawal of accreditation. The Cytotechnology Programs Review Committee's decision is final and CAAHEP will not entertain any appeal on behalf of the program. CAAHEP will notify the sponsor in writing of the Cytotechnology Programs Review Committee's decision.

3. Before the Cytotechnology Programs Review Committee forwards a recommendation to CAAHEP that a program be placed on probationary accreditation, the sponsor must have the opportunity to request reconsideration of that recommendation or to request voluntary withdrawal of accreditation. The CPRC's reconsideration of a recommendation for probationary accreditation must be based on conditions existing both when the committee arrived at its recommendation as well as on subsequent documented evidence of corrected deficiencies provided by the sponsor.

   The CAAHEP Board of Directors' decision to confer probationary accreditation is not subject to appeal.

4. Before the Cytotechnology Programs Review Committee forwards a recommendation to CAAHEP that a program's accreditation be withdrawn or that accreditation be withheld, the sponsor must have the opportunity to request reconsideration of the recommendation, or to request voluntary withdrawal of accreditation or withdrawal of the accreditation application,

whichever is applicable. The Cytotechnology Programs Review Committee's reconsideration of a recommendation of withdraw or withhold accreditation must be based on conditions existing both when the Cytotechnology Programs Review Committee arrived at its recommendation as well as on subsequent documented evidence of corrected deficiencies provided by the sponsor.

The CAAHEP Board of Directors' decision to withdraw or withhold accreditation may be appealed. A copy of the CAAHEP "Appeal of Adverse Accreditation Actions" is enclosed with the CAAHEP letter notifying the sponsor of either of these actions.

At the completion of due process, when accreditation is withheld or withdrawn, the sponsor's Chief Executive Officer is provided with a statement of each deficiency. Programs are eligible to re-apply for accreditation once the sponsor believes that the program is in compliance with the accreditation Standards.

Note: Any student who completes a program that was accredited by CAAHEP at any time during his/her matriculation is deemed by CAAHEP to be a graduate of a CAAHEP-accredited program.

Appendix B

The Curriculum in Cytotechnology for Entry-level Competencies

Preface Information:

This Curriculum in Cytotechnology was developed by the CPRC with input from cytopathology professionals to establish the minimum competencies that new cytotechnology graduates must be able to demonstrate upon entering the profession. The entry-level competencies are divided into six major categories based on the overall knowledge and/or skill set encompassed within: Screening and Interpretation, Basic Laboratory Techniques, Laboratory Operations, Application of Companion Technologies, Evidence-based Medicine, and Professionalism.

Upon completion of a cytotechnology program, graduates should have a sound background in the sciences.

CPRC Cytotechnology Entry-Level Competencies

Upon completion of a cytotechnologist program, the graduate must have successfully completed the following entry-level competencies:

I. SCREENING AND INTERPRETATION

A. Gynecologic Cytology

1. Prior to screening gynecologic cytology specimens, the graduate will review the patient's medical history and gather relevant clinical information.

2. When given conventional and/or liquid-based gynecologic specimens, the graduate will be able to microscopically identify, discriminate and explain the significance of the following entities in the context of a given patient:
    a. specimen adequacy
    b. cellular components within the negative for intraepithelial lesion or malignancy category
    c. non-neoplastic findings including cellular changes associated with infections/organisms, reactive and reparative changes associated with inflammation, effects of therapy, effects of devices/instrumentation and presence of glandular cells in noteworthy circumstances
    d. epithelial squamous abnormalities, including atypical squamous cells of undetermined significance, atypical squamous cells cannot exclude HSIL, low grade squamous intraepithelial lesion, high grade squamous intraepithelial lesion, and squamous cell carcinoma
    e. glandular cell abnormalities including atypical glandular cells, endocervical adenocarcinoma in-situ and endocervical and endometrial adenocarcinoma and their differential diagnoses
    f. other epithelial and non-epithelial malignant neoplasms
    g. extra-uterine malignant neoplasms.

3. The graduate will be able to demonstrate ability to use Pap test computer-assisted screening system(s).

4. When given gynecologic cytology specimens, the graduate will be able to detect, select, and appropriately mark the cells most representative of the nature of any pathological process if present.

5. The graduate will be able to perform a morphologic correlation of cytologic findings with relevant (concurrent/prior) histologic material.

6. The graduate will be able to prepare a report using a contemporary, reproducible, uniform reporting system of interpretive terminology.

7. The graduate will be able to independently evaluate gynecologic cytology specimens with sufficient competence to issue the final report for negative gynecologic specimens.

8. The graduate will appropriately triage gynecologic cytology specimens for high risk HPV testing.

9. The graduate will be able to evaluate gynecologic cytology specimens with a high level of accuracy as defined by the program.

   Although paramount, accuracy should be combined with the realization that timely reporting of results also contributes to patient care.

   *At **minimum**, the* graduate *should be able to manually evaluate an average of 7 non-imaged gynecologic slides per hour (or average of full slide-equivalents per hour for computer-assisted review).*

B. Non-gynecologic Cytology

1. Prior to screening any non-gynecologic cytology specimen, the graduate will review the patient's medical history and gather relevant clinical information.

2. When given samples from any non-gynecologic cytology specimen, including fine needle aspirations, the graduate will be able to microscopically identify, discriminate and explain the significance of the following entities in the context of a given patient:
   a. specimen adequacy
   b. cellular components within normal limits
   c. microbiologic entities and associated cytomorphology
   d. cellular features of degeneration
   e. benign cellular changes
   f. cellular features of benign neoplasms
   g. cellular features of malignant neoplasms
   h. cellular effects of radiation, chemotherapy and other modalities, when available
   i. altered cellular morphology due to collection methods.

3. When given any non-gynecologic cytology specimen, the graduate will be able to detect, select, and appropriately mark the cells most representative of the nature of any pathological process if present.

4. The graduate will be able to triage non-gynecologic cytology specimens for ancillary studies (to include when appropriate-microbiology, flow cytometry, cytogenetics, and molecular analysis) using appropriate transport media.

5. On detection of cellular features of disease, the graduate will be able to develop a differential diagnosis based on synthesis of appropriate data from:
   a. corresponding cell block
   b. morphologic correlation with relevant (concurrent/prior) histologic material
   c. routine special stains including interpretation of positive and negative controls
   d. immunohistochemical stains including interpretation of positive and negative controls, scoring of IHC intensity, and staining pattern (cytoplasmic, nuclear, membranous).

6. The graduate will be able to prepare a report using a contemporary, reproducible, uniform reporting system of interpretive terminology.

7. The graduate will be able to evaluate cellular preparations with a high level of accuracy as defined by the program.

C. FNA Cytology (includes touch preparations)

1. Prior to on-site adequacy assessment and/or cytologic screening of any FNA specimen, the graduate will review the patient's medical history and gather relevant clinical information.

2. The graduate will be able to explain the principles of FNA performance, including indications and characteristics of different image-guided modalities (e.g., transcutaneous, endoscopic U/S-guided, endobronchial U/S-guided).

3. The graduate will be able to perform on-site adequacy assessment of FNA specimens and communicate results of this assessment.

4. The graduate will demonstrate a working knowledge of telecytology as it applies to on-site adequacy assessment.

5. The graduate will be able to triage FNA cytology specimens for ancillary studies (to include when appropriate- cell block preparation, microbiology, flow cytometry, cytogenetics, and molecular analysis) using appropriate transport media.

6. When given any FNA cytology specimen, the graduate will be able to microscopically identify, discriminate and explain the significance of the following entities in the context of a given patient:
    a. specimen adequacy
    b. target specific cellular components within normal limits
    c. microbiologic entities and associated cytomorphology
    d. cellular features of degeneration
    e. benign cellular changes
    f. cellular features of benign neoplasms
    g. cellular features of malignant neoplasms
    h. cellular effects of radiation, chemotherapy and other modalities
    i. altered cellular morphology due to collection methods.

7. When given any FNA specimen, the graduate will be able to detect, select, and appropriately mark the cells/entities most representative of the pathological process if present.

8. The graduate will have a working knowledge of how to identify FNA cytology specimens for further work up following cytologic screening (to include when appropriate-special stains, IHC, molecular analysis).

9. On detection of cellular features of disease, the graduate will be able to develop a differential diagnosis based on synthesis of appropriate data from:
    a. corresponding cell block
    b. relevant (concurrent/prior) histologic material
    c. routine special stains including interpretation of positive and negative controls
    d. immunohistochemical stains including interpretation of positive and negative controls, scoring of IHC intensity, and staining pattern (cytoplasmic, nuclear, membranous).

10. The graduate will be able to prepare a report using a contemporary, reproducible, uniform reporting system of interpretive terminology.

11. The graduate will be able to evaluate cellular preparations with a high level of accuracy as defined by the program.

II. BASIC LABORATORY TECHNIQUES

1. Upon presentation of a cytologic specimen to the laboratory, the graduate will be able to:
    a. explain and apply the basic principles for specimen acceptance and rejection
    b. have knowledge of different preparation and staining techniques, their advantages and disadvantages, and the impact of each on cell morphology
    c. select and perform the preparation and staining technique(s) that is most appropriate for a given specimen(s)
    d. identify and apply principles of quality assurance and quality control as they relate to specimen preparation including, but not limited to:
        - accreditation/regulatory requirements
        - equipment performance and maintenance
        - staining methods
        - stain and technical quality of preparation
    e. solve problems in staining and preparation methods
    f. identify errors that can occur during specimen handling and processing including but not limited to, preparation, staining and instrumentation and apply and implement the most effective resolution.

2. The graduate will be able to use the microscope or other instruments to properly visualize the specimen for systematic morphologic review and interpretation with knowledge of proper use and care, to include troubleshooting.

3. The graduate will be able to use basic laboratory skills and techniques, including universal precautions, aseptic technique, reagent preparation, sample preparation, filtration, centrifugation, and pipetting and micropipetting.

III. LABORATORY OPERATIONS

1. The graduate will be able to explain quality control and quality assurance requirements of applicable accrediting/regulatory agencies including, but not limited to requirements related to competency assessment and proficiency testing.

2. The graduate will demonstrate knowledge of the appropriate slide evaluation limits as outlined by regulatory agencies and demonstrate the ability to document daily workload.

3. The graduate will be able to explain the principles and practices defined by HIPAA.

4. The graduate will be able to explain the requirements and provide documentation that supports maintenance of certification/licensure to practice cytology.

5. The graduate will have a basic understanding of informatics and demonstrate the ability to effectively use the laboratory information system (LIS) including but not limited to viewing patient history, entering results and signing out cases.

6. The graduate will be able to comply with laboratory safety measures and regulations.

7. The graduate will have a basic awareness of emergency preparedness as a member of the healthcare workforce.

8. The graduate will be able to explain and use applicable contemporary ICD and CPT codes for cytologic specimens.

IV. APPLICATION OF COMPANION TECHNOLOGIES

1. The graduate will be able to explain the theory, principles and indications of:
    a. flow cytometry
    b. molecular signal detection (GC/CT,PCR)
    c. molecular diagnostic oncology (e.g., EGFR, ALK, BRAF, KRAS)
    d. computer-based image-analysis and its applications in ancillary tests applied to diagnostic cytopathology.

2. The graduate will be able to explain the theory, principles, indications, technical aspects and troubleshooting of*:
    a. HPV DNA testing
    b. immunocyto-histochemistry (IHC/ICC)
    c. FISH/CISH (fluorescent and chromogenic in-situ hybridization)
    d. standard laboratory digital pathology equipment and procedures, such as, but not limited to digital cameras and photography, digital whole slide imaging scanners, image management, web-screen sharing, and slide viewing

**Does not require performance or proficiency*

V. EVIDENCED-BASED MEDICINE

1. The graduate will be able to demonstrate the ability to critically evaluate medical literature for its pertinence and reliability.

VI. PROFESSIONAL DEVELOPMENT

1. The graduate will be able to explain the importance of continuing education for maintenance of on-going competence.

2. The graduate will be able to demonstrate knowledge of the consequences of specimen evaluation on patient management.

3. The graduate will be aware of cytotechnologist opportunities within professional societies and the cytology community at-large (e.g., patient advocacy, volunteerism, education, research).

4. The graduate will be able to demonstrate knowledge of the ethical role and responsibilities of the cytotechnologist by practicing honesty and integrity in professional duties.

5. The graduate will be able to demonstrate knowledge of the ethical role and responsibilities of the cytotechnologist by practicing the principles of good professional relationships with patients, peers, staff, faculty, and the public.