EACC training and education recommendations

Maj Liv Eide
chairperson

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secretary

*EACC and EFCS 2010

EFCS, represented by the Secretary General Philippe Viehl, gave three assignments to members of the European Advisory Committee of Cytotechnology (EACC):

1	To update the overview of Training and Education of Cytotechnologists in Europe from 2006 (published on the old website of Eurocytology)
2	A summary of what is common and what is different in the European countries.
3	**Propose guidelines for minimum requirements for practising Cytotechnology in Europe**

Survey on training and education of Cytotechnologists in Europe 2010 and 2011

* A questionnaire was distributed in 2010 to 21 countries. We received answers from 14 countries. The results were presented at the IAC Congress in Edinburgh 2010.

* A new, updated and extended questionnaire was distributed in spring 2011 to 25 countries. We received answers from 18 countries. The results were presented at the ECC in Cavtat 2012.

The questionnaire:

1. Number of fully trained and employed Cytotechnologists and competence level
2. Basic education before entry into cytology training
3. Training in cytology
4. Accreditation and certification
5. Continuing education and quality assurance
6. Optimal education

*The results of the survey 2011

TRAINING AND EDUCATION OF CYTOTECHNOLOGISTS IN EUROPE

Anic V. and Eide ML. on behalf of EACC

www.efcs.eu

This was the basis for EACC's proposal for training and education of the future Cytotechnologists together with……

REVIEW

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Survey of training and education of cytotechnologists in Europe

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Survey of training and education of cytotechnologists in Europe

Objective: This report presents the results of a survey of the training and education of cytotechnologists (CTs) in 15 European countries and suggests guidelines on which future education should be developed.
Methods: A questionnaire was sent to 25 countries in 2011: 14 with and 11 without a European Advisory Committee of Cytotechnology (EACC) member or representative. We received responses from 18 countries, among which three were excluded from the survey because they did not have CTs in training.
Results: The number of fully trained and employed CTs in these 15 European countries varied from 35 to 2600. The level of responsibility for most CTs in 14 of these countries was intermediate (signing out negative and inadequate gynaecological samples), whereas seven also had a minority of CTs at an advanced level (signing out abnormal gynaecological samples). Basic education was equally divided (7/8) between countries requiring a bachelor degree or training in medical technology before entry into cytology training. The training in cytology was given as a separate course/education or a combination of separate courses and in-house training, but was often confined to gynaecological cytology. It was recognized that CTs should extend their activities with the advent of human papillomavirus (HPV) testing and vaccination. The training requirement for CTs was usually decided by the national professional society. Most cytology training programmes were accredited by academic institutions at university level and were recognized nationally in almost all of the countries. For most of the countries, the optimal education in the future should be at university level with a diploma in cytotechnology certified or accredited by the European Federation of Cytology Societies.
Conclusion: The survey showed variation in basic education and cytology training, especially with respect to non-gynaecological cytology, although graduate entry was favoured. The role of CTs is changing and the education and training programmes need to adapt to these changes.

Keywords: training, education, cytotechnologists, Europe, human papillomavirus, vaccination

Introduction

The education and training of cytotechnologists (CTs) is a challenge all over the world. In the last decade, with the introduction of human papillomavirus (HPV) testing and vaccination, it is predictable that, in the future, there will be modification in the cervical screening programmes with a substantial reduction in the number of cervical specimens. The introduction of these new primary screening methods represents a potential challenge for modifications in the CT training programmes. We believe that ancillary techniques as well as non-gynaecological cytology should be included in training to develop multiskilled and flexible CTs for future needs in cytopathology.[1–4]

A survey of training and education in Europe was executed by the members of the European Advisory Committee of Cytotechnology (EACC) in 2006, as was done for medical training.[5] An updated overview was needed to obtain information that could help to harmonize the training and education of CTs in Europe. A survey for practising CTs in different

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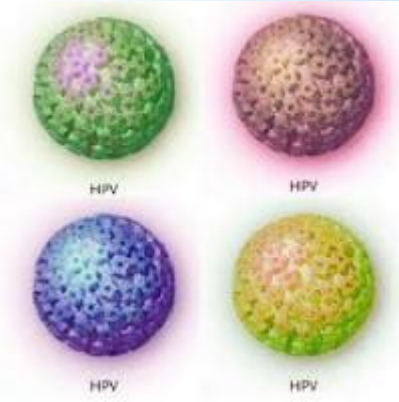
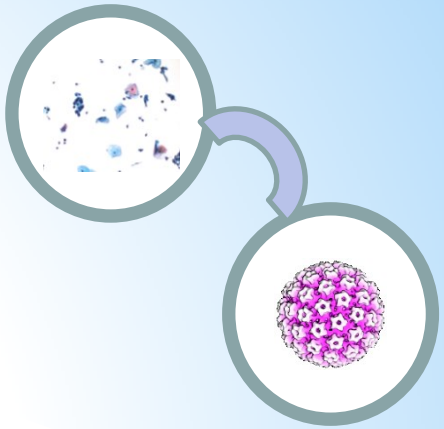
Cytopathology 2014

*…the knowledge that

1	**HPV primary screening is being implemented in more and more countries: > the number of cervical specimens will decrease dramatically**
2	HPV vaccination (2v or 4vHPV vaccine) has been implemented in many European countries and when these women enter the screening program in a few years: > the positive predictive value of cytology will decrease
3	9vHPV vaccine has been approved in 39 countries around the world, which means that: > the positive predictive value of cytology will decrease even more



EACC training and education recommendations



Basic education before entry into cytology training: bachelor in biomedical science, medical laboratory technology or similar.

The education program should be organized at an accredited university.

The training should preferable be a combination of in-house training in a cytology laboratory and education courses at the university.

* EACC training and education recommendations cont.

EACC proposes that the program is divided in three modules with a curriculum defined in subjects, knowledge and skills. Duration: 1 year.

A. Gynecological cytology (12 months)

B. Non-gynecological exfoliative cytology (6 months)

C. Non-gynecological FNAC (6 months)

*Example of EACC proposal for a curriculum

MODULE B: NON-GYNAECOLOGICAL EXFOLIATIVE CYTOLOGY (duration 6 months)		
SUBJECT	**KNOWLEDGE**	**SKILLS**
1. Anatomy, physiology and histology of urinary tract, respiratory tract, pleura, peritoneum, pericard, CNS, joint and alimentary tract.	Acquire knowledge about anatomy, physiology and histology of urinary tract, respiratory tract, pleura, peritoneum, pericard, CNS, joint and alimentary tract.	Be able to know which cells are normally present and the implication of physiology
2. Patient history	Knowledge of different medical terms and clinical implications.	Can gather relevant clinical information.
3. Sample taking and assisting during aspiration of non-gynae exfoliative	Knowledge of sample taking procedures of different non-gynae exfoliative cytology specimens and their impact on morphology,	Be able to advice sample-takers how to perform the procedure in case of inadequate smears or on request.
8. Diagnostics	Knowledge of how to detect, select and mark the cells most representative of the pathological process if present.	Be able to microscopically detect, select and mark the cells most representative of a pathological process and suggest a diagnosis based on cytological criteria.

EACC training and education recommendations cont.

The teachers/supervisors

The teachers should be Cytopathologists and Cytotechnologists with at least 5 years of experience in practising cytotecnology

Trainee record

The trainee should keep record of training activities in a portfolio, which should be regularly assessed by the supervisor. At the end of each module the level of competence should be tested with an exam.

* EACC training and education recommendations cont.

Certified Cytotechnologist

After completion of all three training modules and successful final exam, EACC propose that the Cytotechnologist receive an official title: Certified Cytotechnologist.
Acquired knowledge can be tested by QUATE test or IAC exam.

Master degree

For those who want to obtain a master degree in cytotechnology, they must have completed all three modules with final exam and then we suggest an additional year at the university, working with a relevant master thesis.

*Cytotechnology in USA

2013

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

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.

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.

The curriculum is divided in:

* A. Gynecologic cytology:
* B. Non-gynecologic cytology
* C. FNA cytology

Example of their curriculum

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.

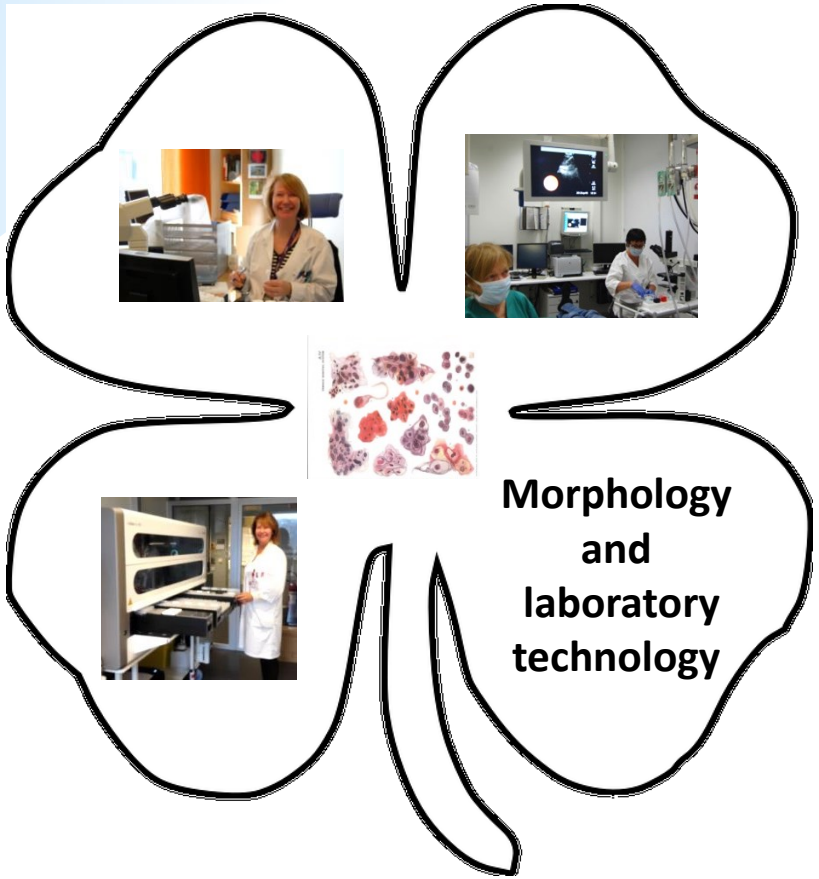
The future training and educational programs in Cytotechnology

* Cervical cytology training programs are mainly good. The competence is still needed for many years, but regularly testing must be done to evalate performance as the positive predictive value decrases.

* There is a lack of structured training programs in non-gynecologic cytology and ancillary techniques in many labs today, which needs serious attention.

* The future Cytotechnologist has to be multiskilled in order to meet the future needs in Cytopathology. The EACC recommendations for training and education is a necessity for obtaining this.

*If we do not take action now..

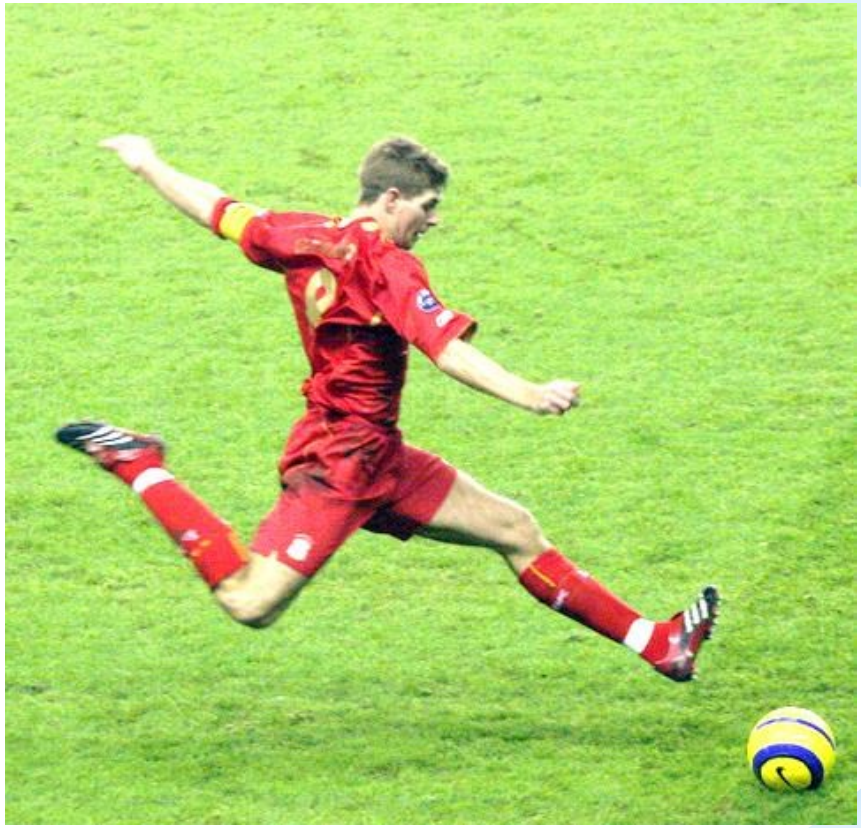


we risk loosing this valuable member of the diagnostic team

EACC and EFCS 2016

- EACC has done their work on suggesting minimum requirements for practising cytotechnology in Europe.

- What now?




TIME TO DECIDE