

Clinical Cytology in Russia: A Report

by I.P. Shabalova, Department of Clinical Laboratory Diagnostics, Russian Medical Academy of Postgraduate Education; Association of Clinical Cytology of Russia; Russian Scientific and Practical Society of Specialists on Clinical Laboratory Medicine, and V.V. Dolgov, Department of Clinical Laboratory Diagnostics, Russian Medical Academy of Postgraduate Education; Russian Scientific and Practical Society of Specialists on Clinical Laboratory Medicine

Clinical Cytology is officially the part (subspeciality) of Laboratory Medicine in Russia. In our country each year more than 48.5 million cytological analyses are performed in 2,830 of 7,007 clinical diagnostic laboratories and in 242 specialized cytological laboratories. The ratio of the specialists with high education: middle education is 1:4.4. The ratio of medical doctors: biologists with high education is 3:5. Medical doctors (MD) of Clinical Laboratory Diagnostic (after six years of high medical education and two years of *ordinatura* – specialization on clinical laboratory diagnostics or anatomopathology) are certified to work in laboratory medicine in Russia. Three categories of middle medical staff work in laboratories as well. Biologists (after University biological education and 500 hours of specialization on clinical laboratory diagnostics including cytopathology) can work in laboratory as biologists of clinical laboratory diagnostics.



Photo: Cytologists from Russia, Belorussia, Ukraine in 18th Congress of EFCC after discussion with Philippe Vielh, nowadays the President of IAC.

In contrast from other laboratory tests cytology is aimed to morphological report (diagnosis). Thus continuing education and practice on cytopathology is necessary for medical doctors and biologists before the beginning of cytopathological practice. Other MD – anatomopathologists, surgeons, etc. – after 500 hours courses of clinical laboratory diagnostics, a course of specialization on cytopathology begin to work as cytopathologists. Notwithstanding to education cytological practice under supervision of experienced colleagues (about five years) is necessary before an experienced specialist begins to work as independent cytopathologist. The clinical cytologist is ripening for a long time to gain knowledge, skills, highest professionalism. Clinical cytologist can work in centralized cytological laboratory, cytological laboratory of Cancer Research and other centers, oncological dispensary, clinico-diagnostic laboratory, anatomopathological department or in commercial laboratory. The main innovations in routine work nowadays is liquid-based cytology (LBC), which is gradually developed in our country giving new advantages for cervical screening, integration of cytopathology, histopathology, immunology, molecular biology and cytogenetics. The main goal of LBC is the standardized cytological sample, and automated systems (as SurePath BD etc.) provide excellent quality of slides, minimum of inadequates, time saving and other advantages. The usage of information technologies can optimize the cytological education and diagnostics and thus to improve the health care as well.

Russia is represented in international medical cytological organizations: International Academy of Cytology (IAC) and European Federation of Clinical Cytology (EFCC) by two societies: Russian Association of Clinical Cytology of (RACC) (President – I. Shabalova, secretary – I. Kostjuchek) and Russian Scientific and practical Society of Specialists on Clinical Laboratory Medicine (RSSSLM) (Board member – I. Shabalova, secretary – K. Kasojan). There are the advantages and challenges of clinical cytology and postgraduate education in Russia. The professional continuing education is obligatory in our country. Department of clinical laboratory diagnostics of Russian Medical Academy of Postgraduate Education (Chair – V. Dolgov) has about 90 years of experience of teaching medical doctors and biologists. There are different possibilities in education: *ordinatura* (2 years), *aspirantura* (PhD) (3 years), *internatura* (1 year),

basic training (1 or 2 month for Doctors, and 3.5 month for Biologists), subspecialization (4 month (for cytopathologists - separately)), small specialized tutorials - 0.5 month. The main goal of our work is to facilitate the education, training and practical experience for cytopathologists, especially for those who live in the remote regions.

Now that a close collaboration between laboratory specialists is necessary in the frames of personalized medicine, our Department runs a lot of different courses for medical doctors and biologists to facilitate the interpretation of cytological slides and other laboratory tests. The exchange of knowledge between clinicians and different specialists in laboratory medicine is especially important since molecular biology and cytogenetics are used in clinical cytology. We have more than 15 years of experience in teaching and learning of postgraduates (multimedia textbooks, computer classrooms equipped with microscopes, distance learning, etc.), the interactive systems for learning and diagnostic decision/consultative work were elaborated (expert systems, image analysis, telepathology), computerized (standardized) cytological diagnosis, etc..

Our Academy is open for NIS and other countries of the former Soviet Union. Lectures, workshops, conferences with the participation of colleagues from Latvia, Kazakhstan, Belorussia, Ukraine, Azerbaijan, Abkhazia, etc., are organized gradually. It is very important, especially for the new generation of cytologists in Russia to have more contacts with the colleagues from other countries to see what can be accepted in our country and what is not acceptable. Thus the international experience of relationship, standardization, education is very important for us.