# THE LATEST TECHNOLOGY AND METHODS OF HIGHER MEDICAL EDUCATION – PRIORITY OF MEDICINE IN UKRAINE

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The latest technology of teaching students become the paramount strategic importance of development of medical science in Ukraine at the present stage. Implementation of the Bologna Process in Ukraine since 2005, focused on the creation of a European Higher Education (The European Higher Education Area, EHEA) to obtain the international European model diplomas.

Sequential phased system of obtaining a student of theoretical knowledge and practical skills in all higher levels (Bachelor  $\rightarrow$  Specialist  $\rightarrow$  Master) is evaluated and calculated on the basis of the European System of Credit Transfer (European Credit Transfer and Accumulation System, ECTS).

This single European credit system of evaluation of student's training is needed to implement the principle of mobility (to continue their education or work in any European higher education) to improve competitiveness, demand and employment of graduates of medical universities of Ukraine in the field of health care in Europe and other countries.

Such prospects of integration of medical science are impose significantly higher professional requirements to the modern teacher and to the modern student.

To a new level in higher medical education are being implemented basic fundamental didactic teaching methods for future highly qualified doctors. It's interactive and distance learning methods, teaching heuristics, pedagogical technique «brainstorm», intercollegiate on-line videoconferences, international student exchange programs, internships and various training courses, exchange of experience and participation in international medical congresses, forums, conferences, publishing articles in international medical journals with high citation index ISSN.

And a prerequisite for active participation in these events – is fluent in English and other foreign languages, the desire to consciously and actively develop the skills of self-education, self-help and cognition, constantly improve their cultural, moral and spiritual level.

Such grandiose opportunities to realize their professional and personal qualities can be realized through direct, active, conscious, full collaboration of all participants of the modern educational process, which aims to ensure high standards of medical education in Ukraine, Europe and worldwide.

## MODERN DIDACTIC'S PROBLEMS IN THE HIGHER MEDICAL EDUCATION TODAY

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In their professional activities, except their high spiritual vocation of humanity and need to meaningful pass descendants on their knowledge, teacher of the highest medical school at the present stage of development of society is obliged to meet the high rank of the teacher in a pristine sense of this word (from the latin «magister» – mentor, teacher).

As at all times, now is not enough to just be himself a highly qualified specialist in the field of medical science at the highest theoretical and practical level.

Modern teacher must be thoroughly familiar with the basic principles of pedagogical skills, which include fundamental knowledge, skills and abilities to form a clear, logical, sequential, successive, well-reasoned, evidence-based, transparent, credible, motivated, authoritative, and ideally even charismatic author's teaching methods craft of healing. That's why at the present stage of practical implementation of the theory of clinical training and medical education have already overdue objective need for each teacher not only higher medical, but also higher pedagogical education.

The basic laws of the receive, learning and knowledge transfer (interactive and distance learning methods, didactical Socrates heuristic, «brainstorm») a modern teacher knowing and applying in their professional activities every day and must constantly and creatively respond to the classic pedagogical questions of didactic (al-Gk.  $\delta t \delta \alpha \kappa \tau \kappa \delta \varsigma - edifying) - «What to teach?» and «How to teach»?$ 

And for higher medical education characterized gradual integration of the «individual didactics» (teaching methods separate academic disciplines – anatomy, physiology, biochemistry etc.) for the formation of each student-future doctor the skills from the teacher or self-finding for analysation, synthesation, systematization and presentation of their knowledge and practical skills.

This encourages the student's creative and their own clinical judgment for the subsequent implementation of the professional medical practice (surgery, therapy etc.).

The subject of modern didactic is the interaction of the teacher's learning process and the student's process of conscious cognitive activity for the mutual constructive resolution

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of the problems: «Who, When, Where and Why to teach»?, because the doctoring it is a gift of God.

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# MODERN ANESTHETICS CONTAINING BENZOCAINE FOR THE APPLICATIVE LOCAL ANESTHESIA IN DENTAL MEDICINE PRACTICE TODAY

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The ethylic ether of the paraaminobenzoic acid – Benzocaine (Anaesthezin, Anaestalgin, Topanalgin) was synthesized in 1890. Now this is quite active, low-toxic local anesthetic, insoluble in water, without resorptive action. Benzocaine is applied in the drug's forms of powders, 5–20% glycerol and oily solutions, 20% gels and sprayaerosols, ointments, 50–70% pastes solids for pain fabric tooth gels, tablets for dissolution in the oral cavity, and for the treatment of the stomatitis this drug combining it with hexamethylenetetramine in stomatological dentistry.

Benzocaine Drugs – Topical paste (Product Deentaries SA, Switzerland), Ultracare (Ultradent), Gelato (Deepak Products Inc.), Dentol (Pharmascience Inc, Canada), Jen-Relief (Jendental Inc., DentMarket, Kyiv, Ukraine), Gingicaine Gel (Belport Co, Gingi-Pask, USA), Topex (Sultan chemists inc., USA), Ez Gel A (PE-Izimediks Kiev, Ukraine – Canada), Ezmedix EZ Gel-A (Ezmedix), Topicale® Xtra (Premier Dental, Canada), Premier Topicale Gel (Premier Dental, Canada) – have a nice taste by cherry, orange, raspberry, strawberry, strawberry, pina-colada or mint, and do not have a local irritant in the mouth.

The appearance of negative side effects possibly due to exceeding the recommended doses or in individual hypersensitivity to Benzocaine.

The applicative local anesthesia in dentistry used to anesthetize the site prior to injection anesthesia, before the excision of the gums and removing hypertrophied papilla, if gums and dentin hypersensitivity, deleting temporary occlusion of deciduous teeth, removing the teeth of the third degree of mobility, during a simple curettage, abscesses's opening, in the treatment of ulcerative stomatitis, remove tartar, to suppress the gag reflex when removing the cast and conducting radiological examinations, for quick removal of the pain of teething children (from 4 months of age – gum's gel 7,5 % Dentol).

This intraoral local applicative (surface or terminal) anesthesia in modern dentistry refers to noninjecting medication methods of local anesthesia, use of which ensures the greatest comfort for patients, which is particularly important in pediatric practice, and success of the whole process of outpatient and inpatient treatment.

Comfortable painless dental procedures carried out is an important criterion of modern professional rating practitioner dentist, in private dental medicine practice especially today.

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## BREAST CANCER AND RADIATION RISK IN SEMEY REGION

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As show the results of years of research conducted in contingents exposed to prolonged high-ionizing radiation (such as nuclear bombing tests and disasters), the negative effect of irradiation is not confined to the direct effect on the treated. Nor is it possible to explain the peculiarities of morbidity in regions subjected to the effect of radioactive fallout by the presence of known hereditary (genetic) defects. There is a hypothesis that the increase in prevalence of several diseases in the descendants of exposed persons may be associated with poorly understood complex of minor genetic changes manifested at the level of regulatory systems dysfunction (nervous, endocrine and immune system, to a certain extent). One manifestation of this disregulatory complex may be the increased frequency of malignant tumors of hormonedependent tissues in the descendants of exposed individuals. At the moment, there has been revealed a considerable number of genes that are predictors of various diseases, including cancer.

In terms of malignant neoplasms, modern epidemiological situation is characterized by reduction in the incidence of a number of previously highlycommon tumors and increase of hormone-dependent tumors, especially those of female reproductive system organs. Breast cancer is in the first place in the structure of cancer incidence in women. Prognostically, breast cancer is favorable when it is timely detected. Unfortunately, in many cases there is a late detection of cancer associated with a greater risk of recurrence and metastasis after specific treatment. Several studies indicate the link between breast cancer and exposure to ionizing radiation. In particular, the increase in cancer incidence was detected in the areas of radiation risk at the Semipalatinsk Test Site (SNTS) that remains under the attention of researchers. There have also been identified peculiarities of genes-predictors prevalence associated with exposure to ionizing radiation, not only in directly exposed individuals, but also in their descendants.