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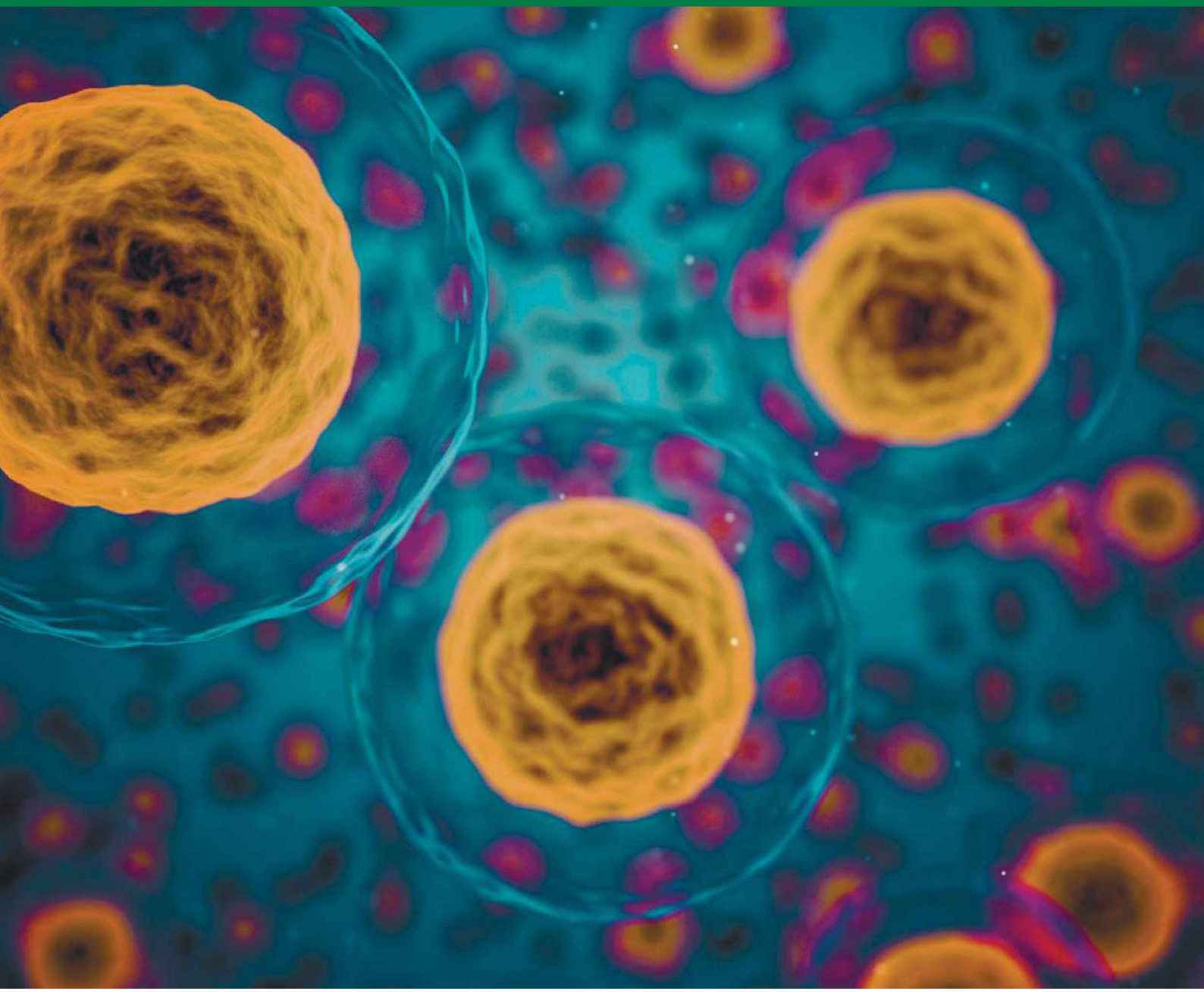

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CRANIOMETRIC INDICATORS OF STUDENTS OF THE DENTAL FACULTY OF KHNMU

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The efficiency of orthodontic and orthopedic treatment is largely depending on the correct diagnosis of changes in the dental system. Sometimes it can be very complex and cannot be performed without special research methods.

The goal of the research. The goal of the research was to establish the dependence of the severity of physiological forms of occlusion on the face type in young people, and to develop a diagnostic method that would study the structure of dentitions and their relationship with the structure of the facial skull.

Materials and methods of research. The research was conducted among students of the dental faculty of KhNMU. We examined 20 males and 20 females aged from 18 to 25 years who has not previously undergone the orthodontic treatment. To study the formed groups, we used anthropometric and index methods of diagnosis of facial types, face proportions and shape of the skull, the ratio of parts of the face of the skull with the subsequent determination of the form of physiological occlusion. Cephalometric methods included the measurement of the following parameters: longitudinal and transverse diameters of the head; physiological and morphological height of the face; heights of the middle, nasal and gnatic parts of the face; mandibular diameter. On the basis of the received metric data calculations of the head and facial index were carried out. The type of face was determined by Garson's facial index. With the Retzius index (cranial index) we set the shape of the skull.

During craniometric research, we used a device proposed by the Department of Human Anatomy and Orthopedic Dentistry of KhNMU (Patent 103046 U Ukraine, IPC (2015.01) A61B5 / 00 G01B3 / 00). This craniometry device has a wider range of functionality than a standard craniometric caliper.

Research results. It was determined that narrow face type in 46% of cases occurs in women, wide face type in 44% of cases is determined in men; facial index for each type of face has relatively the same parameters regardless of gender; mandibular

diameter is most pronounced in males; the proportions of the facial skull are preserved in men and women with a wide type of face; in women with a narrow and medium type of face with a higher frequency of orthognathic occlusion, and in women with a broad type of face - a direct occlusion; in men, regardless of the type of face, the orthognathic type of occlusion is more often registered. Men with a wide type of face also have a large percentage of progenic occlusion.

Conclusions.

1. The obtained results are important for the diagnosis and prediction of the dental system diseases and should be taken into account when planning and conducting medical manipulations in orthopedic dentistry and orthodontics.
2. The conducted researches allow to reveal the changes which occur in dental system during the orthopedic and orthodontic treatment.

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CREATION OF A TOOTH MODEL WITH NONCARIOUS CERVICAL LESIONS FOR ANALYSIS BY THE FINITE ELEMENT ANALYSIS

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Introduction. Noncarious cervical lesions (NCCLs) are one of the most common non-carious lesions that occur after teething. These defects violate the structural integrity of the tooth tissues, lead to increased tooth sensitivity, contribute to the retention of dental plaque and the progression of periodontal disease, negatively affect the vitality of the pulp and aesthetics. Therefore, the study of the mechanism of their development, as well as the planning of further treatment is relevant. One of the main factors in the occurrence of NCCLs is the abfraction process. To perform the structural analysis such as a computation of a stress distribution inside a body the 3D computer model is needed. To obtain the close to real-world results it has to satisfy two requirements: sufficient quality of the mesh and everywhere touching contact surfaces for composite