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# АКТУАЛЬНІ ПИТАННЯ ТЕОРЕТИЧНОЇ ТА ПРАКТИЧНОЇ МЕДИЦИНИ

Topical Issues of Clinical and Theoretical  
Medicine

**Збірник тез доповідей**  
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**ТОМ 1**

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**PLASTINATION TECHNIQUE***Unawunwa Franklin, student grp 419**Head teacher - Sulim L.**Suny State University, Department of Human Anatomy*

Plastination is a technique or process used in anatomy to preserve bodies or body parts, first developed by Gunther von Hagens in 1977. The water and fat are replaced by certain plastics, yielding specimens that can be touched, do not smell or decay, and even retain most properties of the original sample

There are five steps to achieving a good plastination

1. Fixation
2. Dehydration
3. Forced impregnation in a vacuum
4. Positioning
5. Hardening/ Curing

Fixation, frequently utilizing a formaldehyde based solution, serves two functions. Dissecting the specimen to show specific anatomical elements can be time consuming. Formaldehyde or other preserving solutions help prevent decomposition of the tissues. They may also confer a degree of rigidity. This can be beneficial in maintaining the shape or arrangement of a specimen. A stomach might be inflated or a leg bent at the knee for example.

After any necessary dissection take place, the specimen is then placed in a bath of acetone. Under freezing conditions, the acetone draws out all the water and replaces it inside the cells. In the third step, the specimen is then placed in a bath of liquid polymer, such as silicone rubber polyester or epoxy resin. By creating a vacuum, the acetone is made to boil at a low temperature. As the acetone vapourizes and leaves the cells, it draws the liquid polymer in behind it, leaving a cell filled with liquid plastic.

In the next step the specimen is positioned into the final posture. With needles and clamps muscles are put back into the desired position.

The plastic must then be cured with gas, heat, or ultraviolet light in order to harden it.

Specimen has to be set in desired pose. All anatomical structure has to be set in the correct position.

Designing is an intellectual and artical achievement needing a strategic planning and careful review to ensure that the result is aligned with the overall image.

Producing a whole body plastination requires an average time of 8-12 months.

In conclusion

1. The human body reflects our innermost nature, its growth, death, external beauty and fascination of organs has arouse man's curiosity for many years.
2. Plastination allows the body to be shown in cross section. The body becomes visible layer by layer making position of organs and other structures clear.
3. Thanks to plastination technique our body internal structures can be displayed in a way that is more fascinating.

**VIMENTIN EXPRESSION OF PARENCHYMAL CELLS AND STROMAL CELLS OF DUCTAL BREAST CARCINOMA: COMPARATIVE CHARACTERISTICS***Lazaruk O.V.**Department of Pathologic anatomy**Higher State Educational Establishment of Ukraine**«Bukovinian State Medical University»*

Ductal breast carcinoma ranks first among all malignant tumours of the reproductive system in women. To study the processes that occur when changing the normal structures gland tumor should be considered in the processes that occur in the tumour site and area around the tumour. To study the transformation in the fabric around the tumour is widely used immunohistochemical

detection methods, including vimentin. Vimentin - a protein that is expressed in normal cells of mesenchymal origin. Increased expression of vimentin is observed in a variety of epithelial tumours. This, in turn, shows the epithelial-mesenchymal transformation, by which the tumour becomes different characteristics: fast growth, capacity for invasion, metastasis, tumour resistance to treatment and prognosis.

**The aim of the study.** Compare features of vimentin expression in the parenchyma and stromal tumour node structures affected ductal breast cancer obtained by mastectomy.

**Materials and methods.** Investigated 30 cases of histological sections of ductal breast cancer tissue. Specimens prepared in accordance with requirements to perform immunohistochemical techniques (defined expression of vimentin).

**Research results.** In studies conducted in cell division group: vimentin-negative and vimentin-positive. Among the tumour cells in the parenchyma of about 60% - a cell vimentin-negative, 40% - vimentin-positive. In the stroma by a large number of different types of cells, these figures differ. Clearly marked expression in the vessels and cells of lymphocytic infiltration.

**Conclusions.** Most expressed vimentin expression is observed in young cells and cells of the microvasculature.

### **SAMPLE INFORMATION ABOUT THE PRESENCE AND NATURE OF METASTASIS IN PATIENTS WITH INVASIVE DUCTAL BREAST CARCINOMA**

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Ductal breast carcinoma ranks first in the world like a malignant cancer in women. Malignant disease has a direct correlative connection with the emergence of metastases. Metastases - secondary tumour focus in tissues arising from the spread of the tumour. The problem of metastases more significant than the primary tumour. If the tumour can be removed surgically, then identify and remove multiple metastases much more difficult, and often impossible. The presence of metastases immediately worsens the prognosis of life and treatment of tumours. An important task is to identify and prevent metastasis in early stage cancer. The absence of metastases improves the prognosis of the disease.

**The aim of the study.** Investigate signs and ductal breast carcinoma metastasing nature of breast cancer patients Chernivtsi Regional Clinical Oncology Center.

**Materials and methods.** Studied the results of 132 cases with histopathological conclusions invasive ductal carcinoma of the breast for the presence and nature of metastases. We determined the value of the international classification TNM, namely category N (0-3).

**Research results.** Analyzed patients had histopathological conclusion sampling results by category N International Classification TNM. Distributed groups of patients according to available or no metastases respect of the group. Analyzed the results and compared with the performance by category. In the process, found that the number of patients with N<sub>0</sub> categories of cases was 45 cases (34.1%), N<sub>1</sub> category was 48 cases (36.4%), category N<sub>2</sub> - 14 cases (10.6%), N<sub>3</sub> - 25 cases (18.9%).

**Conclusions.** In percentage dominated group N<sub>0</sub> - (34,1%) and N<sub>1</sub> - (36,4%), which in total is 70.5%. This, in turn, provides a better prognosis in women patients, compared with category N<sub>2</sub> - (18,9%) and N<sub>3</sub> - (10,6%).