respiratory (39.5%), nervous (42.9%), tegumentary (26.3%), and psychiatric systems (21.9%). Overall, 17 patients discontinued treatment due to imetelstat-related adverse events as determined by the investigator. The most frequent causes for discontinuation were thrombocytopenia (6 patients), infusion reactions, and fatigue (2 patients each).

Results. Grade 3/4 neutropenia and thrombocytopenia were more frequent with imetelstat. Median progression-free survival was 2.8 and 2.6 months for imetelstat-treated versus control. Exploratory analysis demonstrated a trend toward longer median progression-free survival and overall survival in imetelstat-treated patients with short telomerase, but no improvement in median PFS and OS in patients with long TL.

Conclusions. Maintenance imetelstat failed to improve progression-free survival in advanced NSCLC patients responding to first-line therapy. There was a trend toward a improvement in median progression-free survival and OS in patients with short TL. Short TL as a predictive biomarker will require further investigation for the clinical development of imetelstat.

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SENSORY SYSTEM

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Introduction. Sense Organs. The nervous system is responsible for sensing the external and internal environments of an organism, and for inducing muscle movement. Human sensation is achieved through the stimulation of specialized neurons, organized into five different modalities—touch, balance, taste, smell, hearing, and vision. The touch modality includes pressure, vibration, temperature, pain, and itch. Some animals are also able to sense magnetism and electric fields. Modality, timing, intensity, and location of the stimulus are the four features that allow the brain to identify a unique sensation.

Sensation Receptors. The neurons specialized to detect sensation are also called receptors because they are designed to receive information from the environment. Each receptor responds only to a stimulus that falls within a defined region, called its receptive field. The size of the stimulus can affect the number of receptors that respond, and the strength of the stimulus can affect how much they respond. For example, when a cat sits on your lap, a large population of receptors responds to the cat's weight, warmth, claws, and the vibrations from its purring.

Touch receptors are a type of mechanoreceptor because they are activated by mechanical perturbation of the cell membrane. The axon is located in either shallow or deep skin, and may be encapsulated by specialized membranes that amplify pressure. When the appropriate type of pressure is applied to the skin, these membranes pinch the axon, causing it to fire. The action potential travels from the point of origin to the neuron's cell body, which is located in the dorsal root ganglion. From there, it continues through another branch of the axon into the spinal cord, even as far as the brainstem.

Vision receptors are called photoreceptors because the stimuli that activate them are photons of light. The two types of photoreceptors are called rods and cones. Rods only sense the intensity of light, while cones can sense both intensity and colour. While cones function best in bright light, rods function better in dim light. Furthermore, rods are located diffusely over the retina at the back of the eye, but cones are located in the central line of

vision in a region of the retina called the fovea. For this reason, dim objects in the darkness can be viewed better from peripheral vision than from direct focus. There are three kinds of cones in the vertebrate eye—one responsive to wavelengths of light corresponding to the colour blue, one responsive to red wavelengths, and one responsive to green wavelengths. These three colours form the entire range of colours that humans can perceive.

Hearing receptors, or hair cells, are mechanoreceptors located within a bony spiral structure called the cochlea. Sounds are interpreted by the brain from patterns of air pressure caused by the vibration of objects. Sounds can also travel through water or solid objects. In mammals, the pressure in the air is transformed into mechanical pressure by three ear bones called the malleus, incus, and stapes, located in the middle ear.

Conclusion. Balance Receptors. Vertebrate balance receptors are located in a specialized organ in the inner ear called the vestibular organ. This structure is located directly adjacent to the cochlea, and is composed of a triplet of semi-circular canals, each of which is oriented in a different plane—the X, Y, or Z axis. Movement of liquid in these tubes caused by rotation of the head or body are measured by vestibular hair cells. The stereo cilia of these cells are embedded in a gelatinous material called the otolith membrane. Gravity and body movements cause the otolith membrane to slide, which cause the stereo cilia to bend in a particular direction. This leads to electrochemical changes in the hair cell, causes an action potential in the associated nerve ending. Information from the vestibular system allows eye and head movements to fix on a particular target, and to stabilize a moving image. It also allows organisms to balance—for example, when a cat walks atop a fence.

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RESEARCH OF AUTONOMIC SUPPLY OF INTELLECTUAL ACTIVITY IN YOUNG PEOPLE

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Introduction. According to neurophysiology, there is a difference in the levels of the activity of different parts of the cortex hemispheres between males and females, which is manifested by the difference of speed of decision making, and reactivity, accompanied by different levels of physiological changes of some vital signs, such as elevating the heart rate, and blood pressure, as it can be seen in the results of the stroop test.

Aim. To investigate the differences of autonomic supply in males and females, during the state of mental activity using Stroop test.

Materials and methods. The study included 20 young adults (19-24 years), among them 10 males and 10 females. Vegetative indicators were selected for studying such as: systolic (SAP) and diastolic (DAP) arterial blood pressure which were studied by Korotkov method (mmHg); heart rate (HR) (bpm) which was calculated on the radial artery pulse, and Dagnini-Aschner (oculocardiac) reflex which was used to test the differences of reactivity of the autonomic nervous system between both sexes, and stroop test as the state of mental activity.

Results. According to the results the mean HR increases in percentage (18.3%) compared to the mean value in males (10.3%) with difference between their values before and after the test, but the mean DAP in males (18.7%) is higher after the test than that in females (14.8%), but the difference between the mean SAP value in males (12%) and females (14.3) its higher in females, and the mistakes in females decisions is more than