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of the world such as UK, USA, Turkey, Russia, China and India over the 1989-2018.
RESULTS: Age dependency ratio of the Russian Federation – more than 1.7 times, in the USA – up to 1.9 times the dependency ratio of Chinese population – more than 2.2 times and the UK has dependency ratio higher than 2.5 times of similar indicators in Kazakhstan in 2018. The India shows negative results and coefficient is 1.2 times less. Gender gap in population ageing is clearly visible in the following countries: Russian Federation, China, India, Turkey and Kazakhstan.
CONCLUSIONS: Life expectancy of the elderly population KZ after 65 years in 2018 was only 14.2 years, which is 7-10 years inferior to European and U.S. indices. With the inclusion of new countries in the analysis, the authors came to the conclusion that in non-western countries life expectancy after retirement is less than in Western countries, therefore, non-Western countries have time to adapt their national systems. It is necessary to conduct such a state program that will expand the opportunities of the employment market and the field of health care, as well as other areas where you can get mature, experienced and healthy-minded customers. And focusing on this stratum of the population, we should not forget about the gender aspects that take place according to the results of our analysis.

Antibacterial efficiency of antibiotic-impregnated bone allografts in an *in-vitro* study

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BACKGROUND: Recently, bone allografts have become more widely used in traumatology and orthopedics. In traumatology and orthopedics, bone allografts are used to fill in bone cavities, for example, in chronic osteomyelitis or bone tissue tumors. Treatment of patients with chronic osteomyelitis remains a challenge for modern traumatology and orthopedics. In the treatment of chronic osteomyelitis, bone allografts are used as carriers of antibiotics. Knowledge of the microbiological relationship helps in choosing a rational starting treatment, which is later corrected by analyzing each individual clinical situation and obtaining the results of culture studies. Bone allografts in modern medicine are becoming increasingly popular as a useful bone-plastic material, and sometimes an indispensable tool for the surgeon to remove bone defects. Microbial contamination of postoperative wounds is the main reason for the surgeons' refusal to use bone allografts. In view of the foregoing, it became necessary to create a bone allograft of domestic origin, which would have an antimicrobial effect.
The aim was determine the efficiency of antibiotic-impregnated bone allografts against most frequent post-operation infection agents *St. aureus*, *P. aeruginosa* and *S. epidermidis* in vitro study.
METHODS: The femoral heads were used after hip arthroplasty (approved by the Regional Bioethics Committee). All femoral heads were used after thermal disinfection by processing in the Marburg Bone Banking system. The bone allografts were impregnated by soaking with 2% solution of gentamicin before or after sterilization in the "Lobator-sd2-system". The effects of solid and perforated femoral heads were compared against *St. aureus*, *P. aeruginosa* and *S. epidermidis*. Bacterial suspensions were prepared in sterile circumstances. Bone allografts 1x1 cm in size were placed in a Petri dish and poured a bacterial suspension prepared in advance under sterile conditions. Then incubated in a thermostat at 37 ° C and a relative humidity of 100% for 24 hours. The result was evaluated every 24 hours for 10 days by measuring the zone of inhibition. All results were statistically analyzed using the Mann-Whitney test. A P value less than 0.05 was considered significant.
RESULTS: All tested, impregnated bone allografts with antibiotics retained their antibacterial properties, but in samples impregnated with antibiotics during heat treatment, they were less. Analysis of results demonstrated that the concentrations of gentamycin eluted from the bone allografts were above the minimal inhibitory concentration for long period.
CONCLUSIONS: Antibiotic-implanted bone allografts from living donors, prepared by soaking in antibiotics before or after thermal disinfection in Lobator-sd2-system, have significant properties for the main postoperative pathogens of chronic osteomyelitis. The use of perforation in bone allografts was increased spreading and elution antibiotic of these allografts.

Uric acid level and its relationship with the components of the metabolic syndrome in adult population of the Aktobe province (Western Kazakhstan)

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BACKGROUND: The problem of obesity in the modern world is becoming increasingly urgent and is beginning to pose a social threat to people's lives. This problem is relevant regardless of social and professional affiliation, area of residence, age and sex. Elevated serum uric acid (UA) is a factor in atherogenesis and predictors of cardiovascular disease. However, the role of uric acid as an independent risk factor is still being questioned, and there are no evidence-based recommendations for the treatment of asymptomatic hyperuricemia.
The study was aimed to assess the interrelations of the components of metabolic syndrome with asymptomatic hyperuricemia among the adult population of the Aktobe province.
METHODS: A cross-sectional study of the adult popula-