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INNOVATIVE APPROACHES IN PROSTATE CANCER TREATMENT: PHARMACOECONOMIC AND PHARMACOLOGICAL POTENTIAL OF SUPPOSITORIES WITH 1,2,4-TRIAZOLE DERIVATIVES

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Prostate cancer is one of the most common types of cancer among men, which causes a significant load on the health care system around the world. Modern treatments for prostate cancer include surgery, radiotherapy, hormone therapy, and chemotherapy. However, due to limited effectiveness and serious side effects, there is a constant need to develop new, safer and more effective treatments. Finding alternative medicines is also an urgent task to minimize systemic side effects. One of these approaches is the development of new anticancer drugs based on 1,2,4-triazole derivatives that can be used in suppositories. Derivatives of 1,2,4-triazole have proven anticancerogenic properties. They can inhibit the growth of cancer cells and promote their death by activating apoptosis (programmed cellular death). The use of suppositories can provide a more localized effect of the drug in the prostate, potentially reducing the effect on other organs and tissues. This allows you to use these compounds for purposeful effects on prostate tumor cells. That is why the development of suppositories based on 1,2,4-triazole derivatives is of considerable scientific and practical interest. The use of suppositories allows to provide local delivery of active substances without significant load on other organs and tissues. This can reduce the overall toxicity of the drug and reduce systemic side effects. Suppositories can provide rapid and effective absorption of the active substance through the mucous membrane of the rectum, bypassing the first metabolism through the liver. This increases the bioavailability of the drug and reduces the dosage, which reduces the risk of side effects. The introduction of suppositories with 1,2,4-triazole derivatives can be economically advantageous, as these drugs can be highly effective even in low doses, which reduces the total treatment costs. Local administration of the active substance through suppositories can also reduce the cost of related medical procedures such as injections or chemotherapy. It can also reduce the need for hospitalization of patients, as this method of treatment can be used on an outpatient basis. Reducing hospitals helps to reduce health care. The use of effective and less invasive treatments leads to a decrease in the overall load on the health care system, facilitating more efficient use of resources. Treatment of prostate cancer with suppositories with 1,2,4-triazole derivatives can reduce most unwanted side effects, such as nausea, loss of appetite and fatigue that are characteristic of chemotherapy. Patients can better tolerate treatment, which improves their quality of life and allows you to maintain activity in everyday life. Local treatment with suppositories may be less stressful for patients than other treatments that require inpatient monitoring or complex procedures. If such drugs are available in outpatient mode, it will allow patients to receive treatment without the need to visit hospitals or clinics, which is especially important for people living in distant or rural areas. With the development and production of new suppositories based on 1,2,4-triazole prices for medicines can become more accessible to the general population. This is especially important in countries with limited financial resources. If these drugs are relatively inexpensive in production, they can be included in state cancer treatment programs, which will provide access to patients for patients at no cost. Therefore, the introduction of new anticancer suppositories containing 1,2,4-triazole derivatives is appropriate from pharmacological, pharmacoeconomic and social points of view. These drugs can provide effective treatment for prostate cancer with minimal side effects, reducing the load on the health care system

and reducing economic costs. They can also improve the quality of life of patients and make treatment accessible to more people. The introduction of such new therapeutic approaches is an important step to improving the treatment of prostate cancer and other cancer, given the constant need for innovation in oncology and prevention of cancer.

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