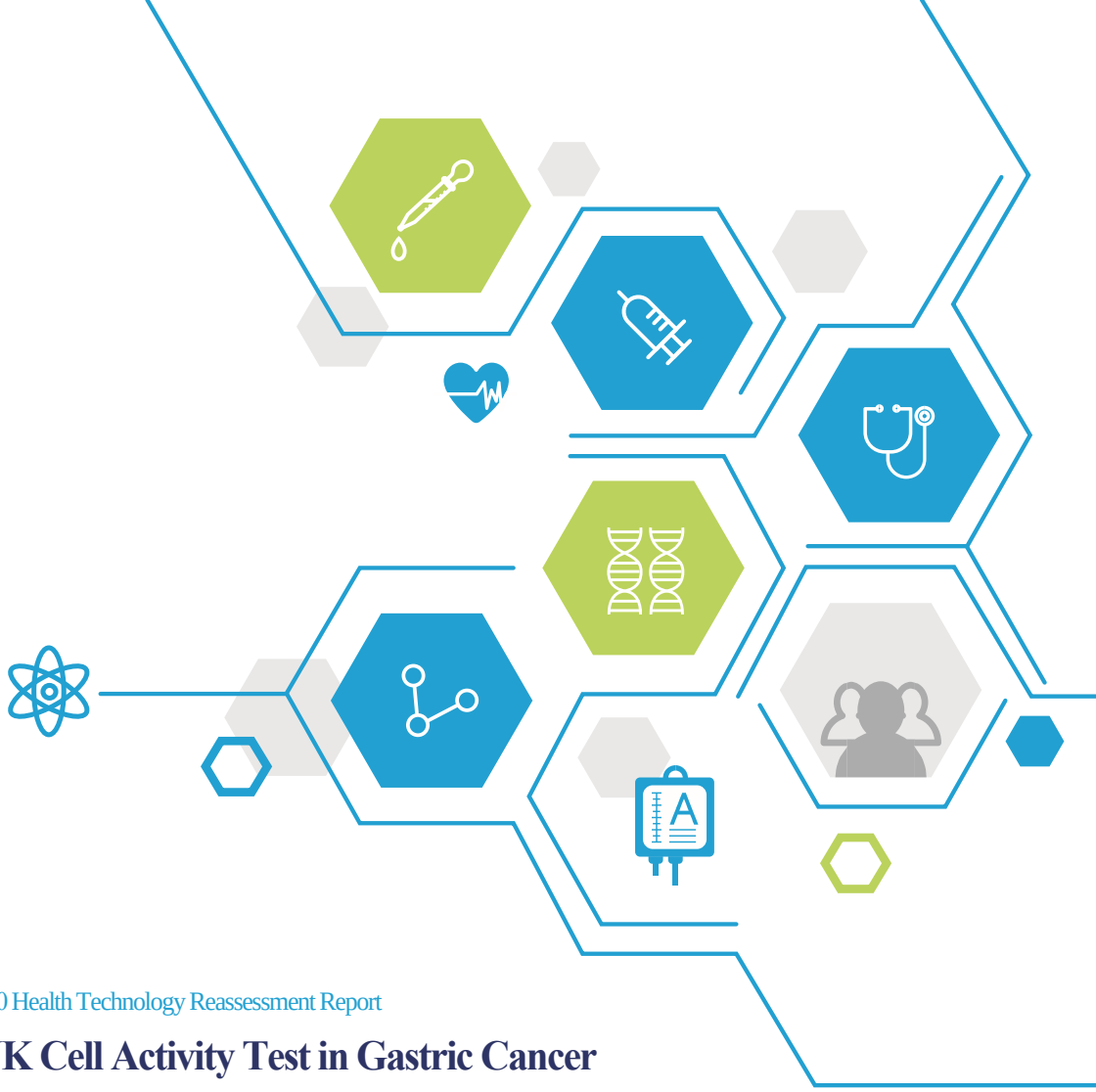

2020 Health Technology Reassessment Report

NK Cell Activity Test in Gastric Cancer

[High-Quality Immunoassay]

NECA
한국보건의료연구원

Summary

Background of Assessment

The NK cell activity test [High-quality immunoassay] is a test performed for gastric cancer patients to check their condition and monitor the progress of treatment by measuring the interferon-gamma (IFN-γ) using enzyme immunoassay after incubation of the patient's blood in a tube containing NK cell-active substances.

At the 4th New Health Technology Assessment Committee (2014.04.25.) in 2014, this technology was reviewed as a technology with safety and effectiveness, the results of the new health technology assessment were noticed (No. 2014-89), and it was registered as a selective benefit (Ministry of Health and Welfare Notice No. 2016-104). Afterward, the Health Insurance Review and Assessment Service requested a re-assessment to derive the necessary data for decision-making, such as determining the feasibility of applying the benefit to the technology. Accordingly, a subcommittee was formed for this technology to evaluate safety and effectiveness.

Committee’s Operation

The subcommittee consisted of a total of 11 members and held a total of three subcommittee meetings for about three months from June to August 2020.

In 2020, the 9th Health Technology Reassessment Committee (2020.09.11.) decided to review the assessment results of this technology at the first and then to the grade of recommendation in the next round. The final deliberation was conducted on the assessment results and grades of recommendations for this issue at the 10th Health Technology Reassessment Committee (2020.10.16.).

Assessment Methods

In this study, a systematic literature review was conducted on the safety and effectiveness of the 'NK cell activity test [High-quality immunoassay]' registered as a selective benefit for gastric cancer patients (applied on July 1, 2016).

Assessment Results

Selection of literature subject to assessment

A total of 1,298 pieces of literature (1,244 foreign articles, 54 domestic articles) were searched through domestic and foreign databases, and one foreign article was finally selected. The safety and effectiveness-related contents reported in the literature are as follows. There were no reports of side effects related to safety tests.

Safety

There were no reports of test-related side effects.

Effectiveness

The interferon-gamma level of the gastric cancer patient group was reported to be lower than that of the healthy volunteer group. Since the study did not report an indicator for monitoring the treatment process for patients with gastric cancer, it could not be confirmed whether it was effective.

Conclusion

As a result of a systematic literature review on the NK cell activity test [High-quality immunoassay] for gastric cancer patients, it was not possible to confirm whether the technology to be evaluated was safe when applied to patients with gastric cancer. Regarding effectiveness, it could not be confirmed because indicators for monitoring the treatment process were not reported in the literature to be assessed.

The NK cell activity test [high-quality immunoassay] is a test performed for patients with gastric cancer to check the patient's condition and monitor the progress of treatment. It was judged as a technology that could not confirm the safety and effectiveness of the technology due to insufficient literature evidence to prove its safety and effectiveness.

Therefore, the Health Technology Reassessment Committee decided not to recommend that NK cell activity test [high-quality immunoassay] be performed for gastric cancer patients to check the patient's condition and monitor the progress of treatment in accordance with Article 4, Paragraph 10 of the Management Guidelines for the Health Technology Reassessment Project (Recommendation Grade II) (2020.10.16.).

Keywords

NK cell, Interferon-gamma, Gastric cancer