The aim of the study was to compare the application of NIPT with the prenatal diagnosis/screening procedures currently applied in the Basque Country.

METHODS:

An analytical decision model was developed to assess the costs and consequences, comparing current prenatal screening, NIPT as a contingency test in high-risk cases and NIPT as a first-line screening test. An economic analysis was conducted to determine which strategy was more cost-effective. Sensitivity analyses were performed (1).

RESULTS:

For a population of 97,074 pregnant women in gestational week 14 and a cut-off point of 1:270, NIPT as a contingent test was not cost-effective, detecting two cases less of DS and causing a lower number of miscarriages related to invasive-testing (4 versus 23) at a slightly lower cost (EUR8,111,351 versus EUR8,901,872).

For risk cut-off points of 1:500 or 1:1000 for contingent NIPT, the number of DS cases detected increased, as did the cost. It could be cost-effective compared with current prenatal screening, (EUR61,763 or EUR256,123 per extra DS case detected, respectively).

Using the NIPT as a primary test detected more DS cases (296 versus 271) and caused less miscarriages (5 versus 23), at a substantially higher cost (EUR41,395,645 versus EUR8,901,872). Cost-effectiveness analysis indicated that it was more expensive and more effective.

Univariant sensitivity-analysis showed that when the price of the NIPT as primary test was EUR76, it was dominant compared with current prenatal screening. It was also cost-effective compared with the NIPT as a contingent test (EUR9,869 per extra DS case detected).

CONCLUSIONS:

The study shows that NIPT had higher detection rates for DS in different scenarios, but the cost constitutes a limiting factor for implementation in the Basque Health System.

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VP40 Comprehensive Evaluation Of Islet Transplantation For Type I Diabetes

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INTRODUCTION:

Despite several therapeutic options existing for the patients with type I diabetes, the patients are still at high risk for severe acute and chronic complications (1). Pancreatic islet transplantation is a promising therapy to achieve good glycemic control with no or little additional insulin (2). This study was to evaluate the effectiveness, safety, economics and social ethics of islet transplantation (IT) for the patients with type I diabetes.

METHODS:

We searched PubMed, Cochrane Library, CNKI and CBM to retrieve eligible literatures. The values of H1bAc before and after transplantation, the rates of insulin independence and functional islet graft at the last follow-up, and the insulin dose per patient-day were analyzed. Descriptive statistics, t tests and random effects meta-analyses were used in the study.

RESULTS:

Totally 21 original papers with 488 cases from 9 different countries were reviewed and analyzed. The studies showed that the H1bAc was decreased from 7.7 percent

https://doi.org/10.1017/S0266462317003269 Published online by Cambridge University Press

(95 percent Confidence Interval, CI: 7.4, 8.1) before IT to 6.2 percent (95 percent CI: 5.9, 6.4) after IT. At the last follow-up, the rate of insulin independence was 48.96 percent (95 percent CI: 31.32, 66.73) and the rate of functional islet graft was 65.79 percent (95 percent CI: 47.06, 82.21). The daily insulin requirement dropped from 0.52U/kg/d to 0.21 U/kg/d. The main adverse events of islet transplantation were bleeding (7.01 percent) and the complications related to immunosuppression therapy (6.37 percent), but they were less than those of whole pancreas transplantation.

Another study with a 20-year follow-up also showed that the cost-effectiveness of islet transplantation (USD47,800 per QALY) was better than that of insulin therapy (USD71,000 per QALY). In spite of the better evidences of islet transplantation, the insufficient organ donation and issues of cell purification and immunological rejection limited islet transplantation's widespread utilization (1).

CONCLUSIONS:

The islet transplantation therapy for the patients with type I diabetes has a potential to achieve insulin independence and better cost-effectiveness, and is relatively safe. But there are some obstacles for its wide utilization.

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VP44 Rapid Health Technology Assessment – High-Intensity Focused Ultrasound For Breast Fibroadenomas And Benign Thyroid Nodules

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INTRODUCTION:

High-intensity focused ultrasound (HIFU) is a non-invasive ablative technique to treat breast fibroadenomas and benign thyroid nodules. A rapid Health Technology Assessment (HTA) was commissioned to inform the Changi General Hospital's decision on procuring a HIFU system.

METHODS:

A systematic literature search was conducted for systematic reviews, HTA reports and clinical practice guidelines on the clinical effectiveness of HIFU systems with the following PICO elements:

Patients = patients with benign breast fibroadenomas or thyroid nodules

Intervention = HIFU

Comparator = conventional treatment

Outcomes = clinical outcomes

Retrieved studies were summarized in a narrative synthesis.

RESULTS:

A few small case series showed reduction in volume of fibroadenomas/nodules in the short term and side effects were minor. Additionally, in HIFU for benign thyroid nodules, conference abstracts described a small open-label, randomized controlled trial where patients receiving HIFU had nodule volume reduction of over 30 percent compared to no reduction in the observation group, at 6 months; and a small non-randomized controlled study where volume reduction was about

https://doi.org/10.1017/S0266462317003269 Published online by Cambridge University Press