

Ethical concerns in prenatal genetic tests. Could they be also used for discrimination before birth?

Non-invasive prenatal genetic testing NIPT is a method that *uses maternal blood to detect fetal chromosomal abnormalities and other characteristics* in early pregnancy, with no risks for the fetus. This makes it a promising method from both a medical and ethical perspective, because prenatal diagnosis based on amniocentesis or chorionic villus sampling is known to have a small, but real, risk of inducing a miscarriage, which is difficult for many women to accept.



Flourishing line of business

NIPT has experienced considerable growth since its advent in 2011, especially because it is offered by various commercial companies, making it accessible to the vast majority of people and countries (including by Internet commerce). NIPT can detect sex-related chromosome abnormalities, rare

subchromosomal microdeletions and aneuploid disorders (disorders with more or less than 23 chromosomes), especially [Down's syndrome](#); more recently, it has even been able to [analyze the whole genome](#). Nevertheless, there are still few studies that support its clinical utility.

Bioethical problems

NIPT also presents additional objective bioethical problems, such as:

- being able use it without the required informed consent, the potential promotion of [abortion](#),
- **the fact that the rights of the disabled can be violated**, that
- issues of justice among possible users can arise, and
- the fact that a not insignificant number of false positives are obtained.

To assess these problems, the Hastings Center organized a 4-day international symposium to assess the clinical, ethical, legal, social and economic aspects (see [HERE](#)).

The outcome refers to several aspects that should be taken into account when promoting or using NIPT:

- 1) the limit of personal autonomy to use the test;
- 2) the possible promotion of abortion;

- 3) possible sex selection and how it could affect the “family balance”;
 - 4) ***the negative effect that it might have for disability***, from both a socioeconomic and cultural point of view, mainly how it might affect fetuses with chromosomal problems, **especially Down’s syndrome**;
 - 5) also, how economic issues could affect its unfair use in public health environments or in countries with a different economic level;
 - 6) the impact on health programs following an excessive prevalence of commercial interests; and
 - 7) the possibility of use without these measures being taken into account by healthcare professionals. The ethical concerns are evaluated in an extensive report relative to this symposium we recommend to read (see [HERE](#)).
- *See our Special Report, [Genome sequencing in foetal. This prenatal diagnosis arrises a new level of complexity to medical, family and social decisions](#)*



Justo Aznar MD PhD



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