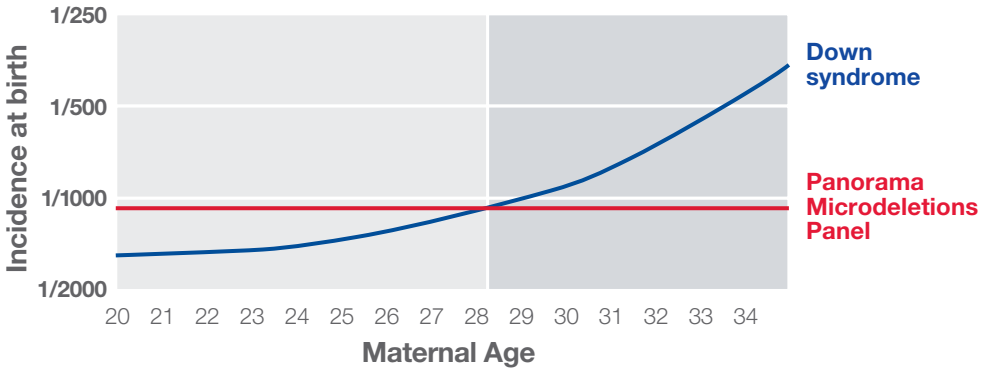
The Panorama Difference

Panorama screens for more clinically relevant conditions with greater accuracy

Test Feature	Clinical Significance	Harmony	Panorama®
Trisomies 21, 18, 13	Detection of common aneuploidies	✓	✓
Sex chromosomes	Detection of sex chromosome abnormalities	✓	✓
Fetal fraction measurement	Indicates whether sufficient fetal DNA is present to make a high confidence call	✓	✓
Microdeletions (22q11.2 deletion, Angelman, Prader-Willi, 1p36 deletion, Cri-du-chat)	Can be more common than aneuploidies in younger women	✗	✓
Triploidy	Miscarriage or severe birth defects in fetus; risk of severe complications for the mother	✗	✓
Vanishing twin	Common cause of false positive results when not detected [14,15]	✗	✓
Maternal contribution [1,2]	May lead to false positive or false negative results when not detected	✗	✓
No errors in fetal sex calls in validation studies [1,2,3,4]	Minimizes discordance with ultrasound	✗	✓
SNP-based risk assessment for chromosome conditions	Identifies risk with higher accuracy than counting methodologies	✗	✓
9 weeks gestational age	Earliest test date of any NIPT	✗	✓
Validated in high and low risk women on current platform [1,9,10]	Ability to screen pregnant women of all ages	✗	✓

Panorama screens for five microdeletions that affect more pregnancies than Down syndrome in younger women[5,6,7]



- Early detection and medical intervention may improve clinical outcomes and quality of life for the child
- Microdeletions often result in severe physical and intellectual disabilities
- Microdeletions are difficult to identify prenatally and can go unrecognized at birth

The American College of Medical Genetics and Genomics (ACMG) supports the use of noninvasive prenatal testing (NIPT/NIPS) as first-line screening for all women,[8] but not all tests are equally validated.

Panorama is clinically validated as highly accurate for women of all ages on its current NGS platform[1,9]

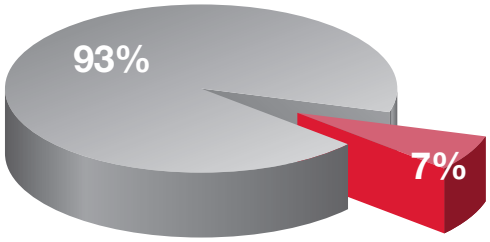
	Validation T21, T18, T13 and MX		Clinical Outcomes T21, T18, T13 and MX (Aneuploidy Incidence)	Sample size (N)
	Sensitivity	Specificity	Positive Predictive Value (PPV)	
High Risk*	**98.0%** (98/100)	**99.5%** (389/391)	**82.9%** (2.4%)	**16,744**
Average Risk*	**100%** (5/5)	**100%** (469/469)	**87.2%** (1.0%)	**13,059**

*For the purposes of calculating PPV, high risk was defined as women ≥35years old at delivery, and average risk was defined as women <35 years at delivery.

In contrast, Harmony's current microarray platform is not clinically validated in average risk pregnancies[10]

High test accuracy is more difficult to achieve on microarray versus next-generation sequencing (NGS) when fetal fraction is on the lower end[11]

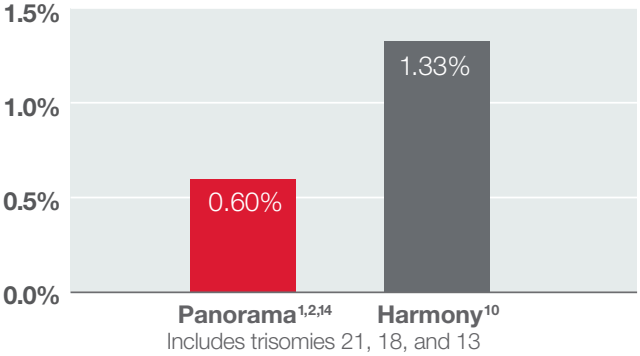
Harmony's NGS outcomes were based on >22K samples across high risk and average risk[12]



Harmony's microarray outcomes are based on 1.7K **high-risk** samples (an enriched data set with an aneuploidy rate of 20%); average risk not validated[10,13]

Harmony has more than 2X as many false negatives as Panorama[1,10,14]

Combined FNR in validation studies



Includes trisomies 21, 18, and 13

Reducing false negative rates (FNR)

- **Low fetal fraction:** Up to 1/3 of all NIPT cases have a fetal fraction less than 8%, which is associated with decreased sensitivity. Panorama's SNP-based methodology enables it to adjust its algorithm to improve sensitivity at low fetal fractions.
- **Triploidy:** Triploidy can be associated with serious maternal complications, such as gestational trophoblastic disease (GTD). Panorama is the only NIPT that is validated to screen for triploidy.

References at www.natera.com/panorama-test/references-23

Learn more at www.lifelabsgenetics.com/non-invasive-prenatal-testing/

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