
natera™
Panorama™
Next-generation NIPT
See more with
Panorama AI
The most widely used NIPT is now powered by Artificial Intelligence

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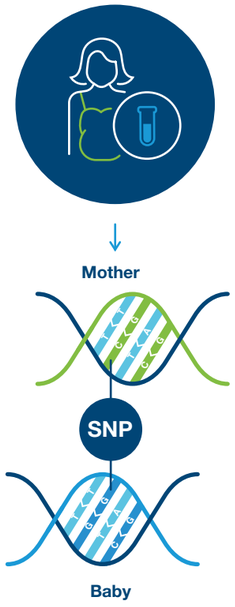
Next-generation NIPT

The only SNP-based NIPT delivers more insights and greater accuracy

Panorama's single nucleotide polymorphism (SNP)–based non-invasive prenatal test (NIPT) is:

- the most rigorously validated NIPT
- the only NIPT that distinguishes mother's DNA from baby's DNA
- the approach that creates unique, clinically validated capabilities



SNPs
Panorama evaluates SNPs — the 1% of our DNA that makes us different from one another.

The #1 NIPT is now powered by Artificial Intelligence

Panorama AI leverages artificial intelligence (AI) to learn from the more than 2 million tests already processed by Natera.

Panorama AI combines AI with Natera's proprietary SNP-based methodology to give accurate results on difficult-to-call cases.

- Maintaining industry-leading accuracy while significantly lowering "no-call" rates
- Increasing accuracy for 22q11.2 deletion detection[1]

#1 for a reason[13]

TESTS
2M+
performed

PATIENTS
1.3M+
studied

SNP TARGETS
13,392

PUBLICATIONS
23+

Panorama AI was validated in SMART, the largest prospective NIPT study[1,5,6]

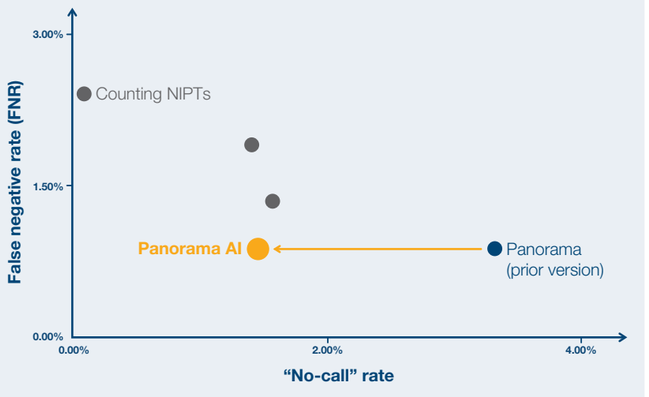
SMART
SNP-based Microdeletion and Aneuploidy RegisTry

PATIENTS	SITES	OUTCOMES
20,000+ studied	21 global centers	~90% of samples with genetic truth*

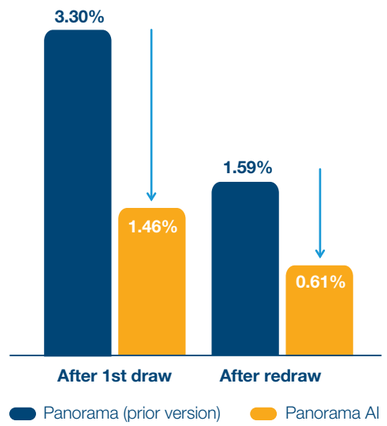
Highest accuracy. Lower "no-calls."

Historically, there has been a trade-off between NIPT accuracy and "no-call" rates. With Panorama AI, that paradigm has been broken, delivering the best of both worlds.[1–4,14,15,18–20,23–25]

Panorama AI has a significantly lower "no-call" rate as validated in the SMART study[1]



"No-call" rates

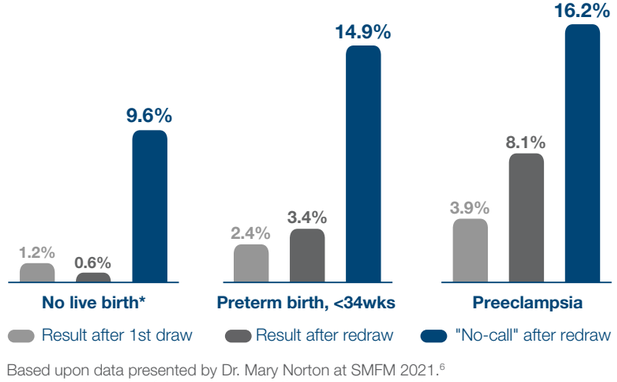


*Most other studies of this kind rely on observational assessment, not genetic diagnostic testing.

"No-calls" provide actionable information

SMART showed that, for Panorama, patients with "no-call" results after redraw have significantly higher rates of adverse outcomes—compared to baseline or patients with a call after redraw.[6]

Adverse pregnancy outcome rates for Panorama (prior version)



Based upon data presented by Dr. Mary Norton at SMFM 2021.[6]
*Includes intrauterine fetal demise, stillbirth, miscarriage, and termination.

CLINICAL UTILITY OF "NO-CALLS"

Panorama AI further enriches this increased-risk group, making the "no-call" after redraw group highly actionable.[6,13]
Consider the following for this group:

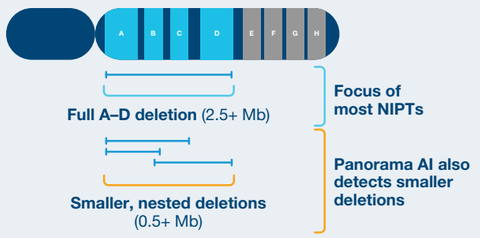
- Increased surveillance for pre-term labor and preeclampsia

> *"Patients with failed cfDNA should have follow-up surveillance."*
>
> **MARY NORTON, MD**

Unparalleled screening for 22q11.2

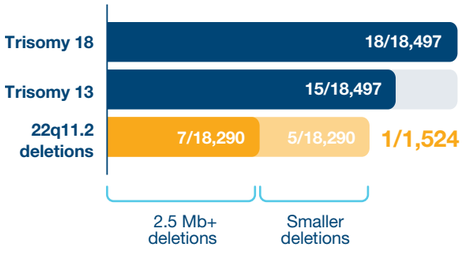
Panorama AI has increased accuracy for 22q11.2 deletion screening.[5]

Panorama AI can identify most 22q11.2 deletions, including small deletions of 0.5 Mb.[5] Most NIPTs can only screen for large microdeletions—above 2.5 Mb.[22,27]



>99.9%	83%	53%
Sensitivity[5]	Sensitivity[5]	PPV[5]
Full A–D deletion (2.5 Mb+)	Full & nested deletions (0.5 Mb+)	

22q11.2 had an incidence rate that was comparable to some of the common trisomies[1,5]



ACTIONABLE PERFORMANCE

Panorama AI has increased sensitivity and >2X the positive predictive value (PPV) for 22q11.2 deletions, enhancing the impact of this screen, given the number of prenatal/neonatal interventions for this disorder.[5]

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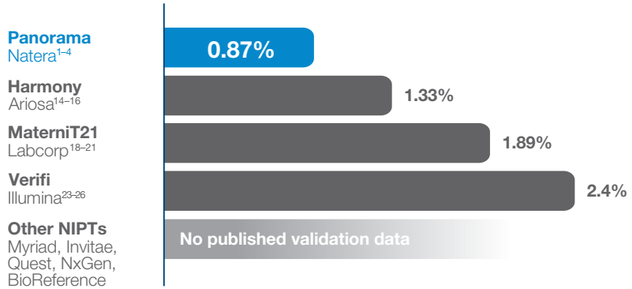
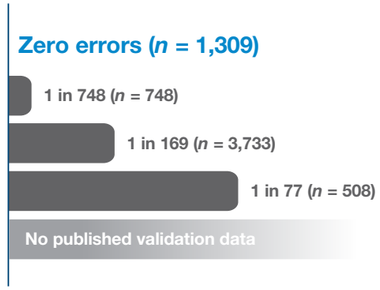
Panorama maintains industry-leading performance and clinical value in singleton pregnancies

Combined FNR in clinical validation studies (T21, T18, T13)



Fetal sex error rate in clinical validation studies



Panorama provides unique information to appropriately triage high-risk twin pregnancies

Zygosity is key in appropriately managing twin pregnancies and monitoring for such conditions as twin-twin transfusion syndrome (TTTS):

- One-fifth of monochorionic twins are misidentified by ultrasound.[28]
- One-sixth of misidentified cases that are referred to fetoscopic centers reach stage IV TTTS, and one-fifth suffer fetal/neonatal demise.[29]

According to ACOG and SMFM, divergent fetal fraction in dizygotic twins can make it difficult to detect aneuploidy in a twin with low fetal fraction if the other twin is euploid and has a high fetal fraction.[30]

Only Panorama NIPT can detect zygosity

ZERO
errors in zygosity detection[7*]

Only Panorama reports individual fetal fraction**

7%
of dizygotic twins have highly divergent fetal fraction[8]

*In validation studies
**For dizygotic twins

Every pregnancy deserves Panorama

> *"...(NIPT is) the most sensitive and specific screening test for the common aneuploidies...should be discussed and offered to all patients regardless of maternal age or baseline risk."*[30]
>
> ACOG PRACTICE BULLETIN 226

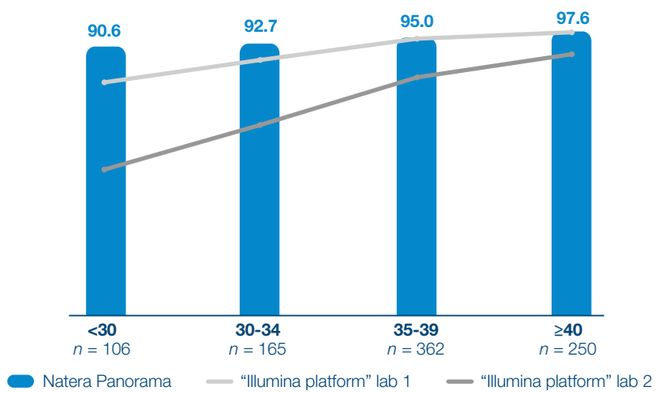
ACOG guidelines highlights, including unique capabilities of SNP-based NIPT

ACOG PRACTICE BULLETIN 226 HIGHLIGHTS[30]	PANORAMA SNP-BASED NIPT[1-4,7-12]	COUNTING-BASED NIPT METHODS[14,15,18-20,23-25]
"Cell-free DNA [NIPT] *can be* ***performed in twin pregnancies****"*	✓	✓
"...one laboratory method which uses ***SNP analysis reports zygosity as well as individual fetal fractions****."*	✓	✗
"[In twin gestations,] *it is possible that an* ***aneuploid fetus would contribute less fetal DNA****, therefore masking the aneuploid result."*	✓	✗
Highlights known sources of false positives for most NIPTs: • **Vanishing twin** • **Maternal mosaicism**	**Addressed**	**Not addressed**
"Of the [NIPT] *methods, the* [SNP-based] *method can* ***identify triploidy****."*	✓	✗
"...the lower prevalence of fetal trisomies in ***younger patients*** *results in...a* ***lower PPV****..."*	**Robust clinical PPVs published**	**Analytical PPVs available**

Panorama's areas of unique clinical value

- Twins differentiation
- Every result matters
- Accuracy and reliability

Trisomy 21 PPVs by age groups, shown in a large, 1M patient outcomes study[12,13,31,32]



PPVs
Strong clinical evidence with robust PPVs, regardless of age.

NateraCore—simple, tailored resources to support you and your patients every step of the way

Education
Patient-friendly materials and information sessions, covering basic genetics to specific tests

Access
Programs and price transparency – rooted in our commitment to provide affordable testing for all who can benefit

Ordering
Flexible options based around your needs, including intuitive remote ordering

Results
Clear, actionable reports, served with time-saving tools and a side of expert guidance

Next steps
Value-add services that go beyond the test to address what's next

A selection of our NateraCore offerings

Pre- and post-test genetic information sessions – access to board-certified genetic counselors, available to all providers and patients

Price Transparency Program (PTP) – personalized cost estimates and a self-pay cash alternative

Virtual testing – fully remote testing option, combining online ordering with self-service patient education and mobile phlebotomy

Flexible phlebotomy options – via local, Natera-approved lab or at-home mobile services; available in all states, at no cost to patients

Panorama screens for:

Singleton pregnancies

- Trisomies 21, 18, 13
- Monosomy X
- Triploidy
- Sex chromosome trisomies*
- 22q11.2 deletion syndrome (optional)
- Additional microdeletion syndromes (optional)
- Fetal sex (optional)

Twin pregnancies

- Zygosity
- Trisomies 21, 18, 13
- Fetal sex for each twin (optional)

If screening reveals monozygotic twins, Panorama can additionally screen for:

- Monosomy X
- Sex chromosome trisomies*
- 22q11.2 deletion syndrome (optional)

Egg-donor or surrogate pregnancies (singleton pregnancies only)

- Trisomies 21, 18, 13
- Fetal sex (optional)

References

1. Dar et al. Multicenter prospective study of SNP-based cfDNA screening for aneuploidy with genetic confirmation in 18,497 pregnancies. *Society of Maternal-Fetal Medicine, SMFM*. Virtual Meeting. Oral Presentation. Jan 25-30, 2021
2. Pergament et al. *Obstet Gynecol*. 2014 Aug; 124(2 Pt 1):210-8
3. Nicolaides et al. *Prenat Diagn*. 2013 June; 33(6):575-9
4. Ryan et al. *Fetal Diagn Ther*. 2016;40(3):219-223
5. Dar et al. Multicenter prospective study of SNP-based cfDNA for 22q11.2 deletion in 18,290 pregnancies with genetic confirmation. *Society of Maternal-Fetal Medicine, SMFM*. Virtual Meeting. Oral Presentation. Jan 25-30, 2021
6. Norton et al. Perinatal and genetic outcomes associated with no call cfDNA results in 18,497 pregnancies. *Society of Maternal-Fetal Medicine, SMFM*. Virtual Meeting. Oral Presentation. Jan 25-30, 2021
7. Norwitz et al. *J Clin Med*. 2019 Jun; 8:937
8. Hedriana H et al. *Prenat Diagn*. 2020 Jan;40(2):179-184
9. Nicolaides et al. *Fetal Diagn Ther*. 2014;35(3):212-7
10. McKanna T et al. *Ultrasound Obstet Gynecol*. 2019;53(1): 73–79
11. Martin KA et al. *Am J Obstet Gynecol*. MFM 2020;2:100152
12. DiNonno W. et al. *J Clin Med*. 2019 Aug; 8,1311
13. Natera internal data on file
14. Stokowski et al. *Prenat Diagn*. 2015 Dec; 35(12):1243-6
15. Jones et al. *Ultrasound Obstet Gynecol*. 2018 Feb;51(2): 275-276
16. Hooks et al. *Prenat Diagn*. 2014;34(5):496-499
17. Schmid et al. *Fetal Diagn Ther.* 2017, DOI: 10.1159/000484317
18. Palomaki et al. *Genet Med*. 2011 Nov; 13(11):913-20
19. Palomaki et al. *Genet Med*. 2012 Mar; 14(3):296-305
20. Porreco et al. *Am J Obstet Gynecol*. 2014;211:365.e1-12
21. Mazloom et. al. *Prenat Diagn*. 2013 Jun;33(6):591-7
22. Tynan et al. *Society for Maternal-Fetal Medicine, SMFM*. Las Vegas, Nevada. Jan 23-28, 2017
23. Sehnert et al. *Clin Chem*. 2011 Jun;57(7):1042–1049
24. Bianchi et al. *Obstet Gynecol*. 2012 May; 119(5):890-901
25. Bianchi et al. *N Engl J Med*. 2014;370:799-808
26. Verinata white paper. Analytical validation of the Verifi prenatal test. 2012
27. Commercial protocol not validated; Illumina marketing materials cite "Srinivasan et al. Am J Hum Genet. 2013 Feb 7; 92(2): 167–176" which does not match number of reads used in commercial testing
28. Blumenfeld et al. *J Ultrasound Med*. 2014 Dec;33(12):2187-92
29. Baud et al. *Ultrasound Obstet Gynecol*. 2014; 44: 205–209
30. ACOG Practice Bulletin 226. *Obstet Gynecol*. 2020 Oct;136(4):859-867.
31. Myriad Women's Health website accessed Oct 23 2019
32. Progenity Innatal Clinician Guide.

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Conceive. Deliver. Thrive.

*Reported when suspected