

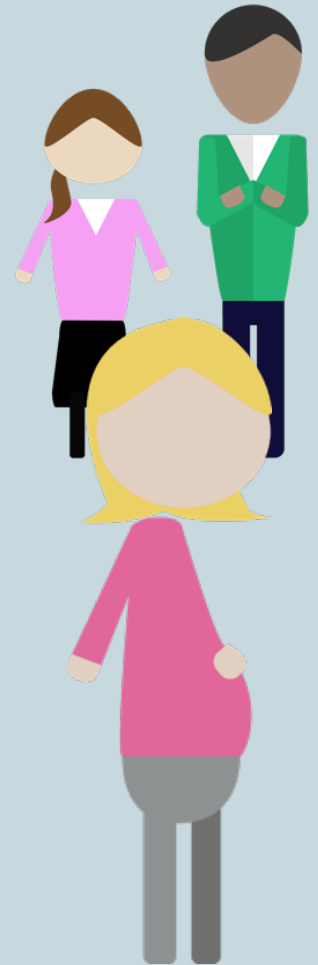
Case scenario 7 – Ria, Sandra and Chris

Part 1

Ria is a surrogate mother for Sandra and Chris.

Sandra has requested NIPT screening.

This is a singleton pregnancy and the donor egg was from a 28yr old woman (this is not Ria's or Sandra's egg). Ria is currently 12 weeks pregnant.



Is the following statement True or False?

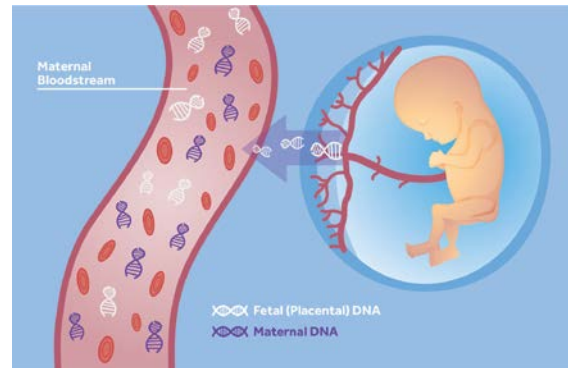
Surrogacy is not a contraindication for NIPT as next generation sequencing analyses levels of counts and fetal fraction.

As long as the patient has no other contraindications to screening, and consents, NIPT is suitable.



Answer

a) True



Additional note

Even in a surrogate pregnancy, there is cell free DNA circulating from the placenta. The test works in the same way as a spontaneous pregnancy.

Case scenario 7 – Ria, Sandra and Chris

Part 2

Whilst taking Ria's medical history, she reports that she received a blood transfusion 12 months ago following the birth of her last child.

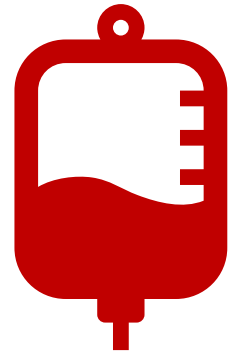
Sandra reports that she had breast cancer 2 years ago and is now in remission.

Both Sandra and Ria report no genetic or chromosomal conditions.



True or False?

A blood transfusion within 12 months of NIPT is a contraindication.



Answer

b) False

Additional note

Blood transfusions are a contraindication if received within 3 months prior to NIPT.

Will Sandra's history of breast cancer affect the result of NIPT?

- a) Yes
- b) No



Answer

b) No

Additional note

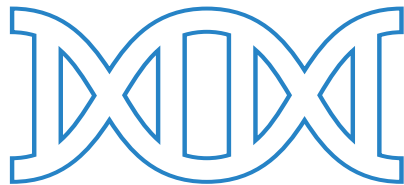
Current cancer is a contraindication to NIPT. Sandra has been in remission for 2 years. She could have NIPT. However Sandra is not being tested, therefore her medical history is irrelevant.

Unsuitable if the mother has:

- ✘ Cancer
- ✘ Trisomy
- ✘ Undergone Stem Cell Therapy or Immunotherapy
- ✘ Received an organ transplant

Why is current malignancy a contraindication to NIPT screening?

- a) The medications used for treatments will cause the NIPT test to fail
- b) Malignant tumours shed cfDNA fragments and therefore can affect a NIPT result
- c) Some medications used for cancer treatment have donor DNA, this can cause an inaccurate result

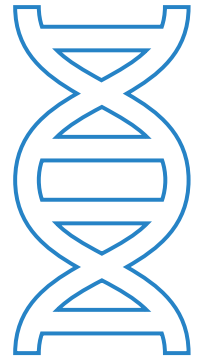


Answer

b) Malignant tumours shed cfDNA fragments and therefore can affect an NIPT result

Additional note

A tumour can shed tumour cfDNA into the maternal circulation. Cancer cells have major chromosome abnormalities that can affect cfDNA results.



Can Ria have the SAFE test?

a) Yes

b) No



Answer

a) Yes

Additional note

Although there is a lot of information to consider in this scenario, there are no contraindications.