

### Karyotyping Activity

You are a health-care worker who needs to examine karyotypes of patients. Your job is to determine if any of these patients have a chromosomal disorder. On the back of this sheet is a normal male and female karyotype for that you can use for reference.

Some possible disorders that you may encounter:

**Cri-du-chat Syndrome:** This is a patient who is missing the short arm of chromosome 5

**Down's Syndrome:** This is a patient who has three copies of chromosome 21. It is also called Trisomy 21. The patient can be of either gender.

**Edwards Syndrome:** This is a patient with three copies of chromosome 18. The patient can be of either gender.

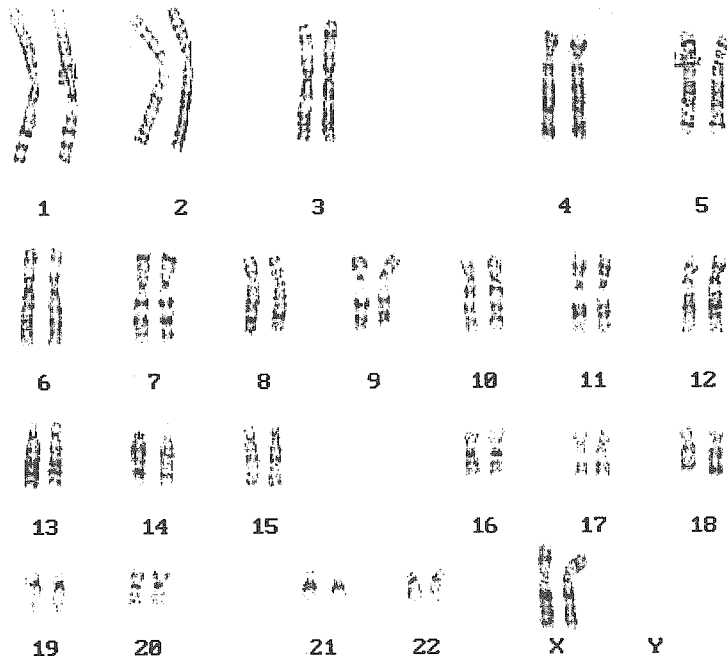
**Klinefelter's Syndrome:** This is a male who has more than one X chromosome.

**Patau Syndrome:** This is a patient with three copies of chromosome 13. The patient can be of either gender.

**Trisomy 19:** This is a patient with three copies of chromosome 19. The patient can be of either gender

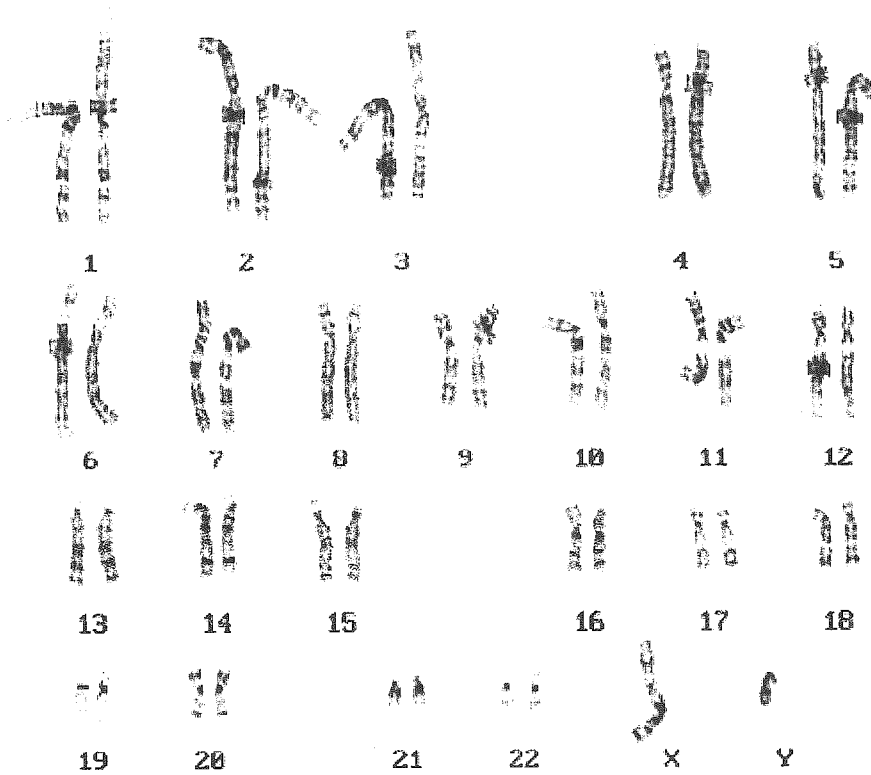
**Turner's Syndrome:** This is a female who only has one copy of the X chromosome.

Karyotype of a normal female:



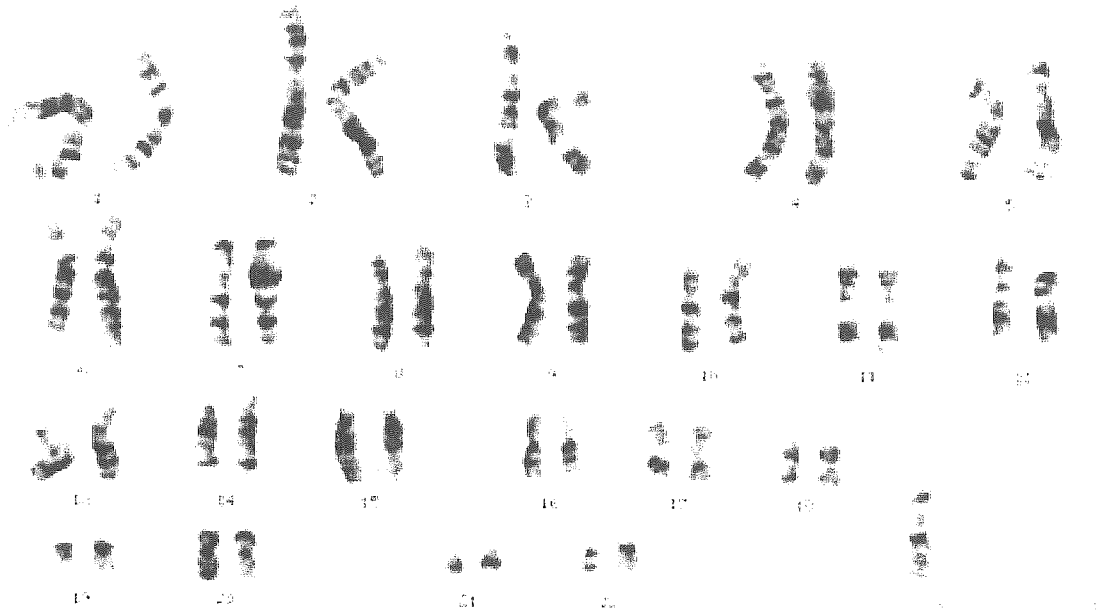
Karyotype: 46,XX

Karyotype of a normal male:



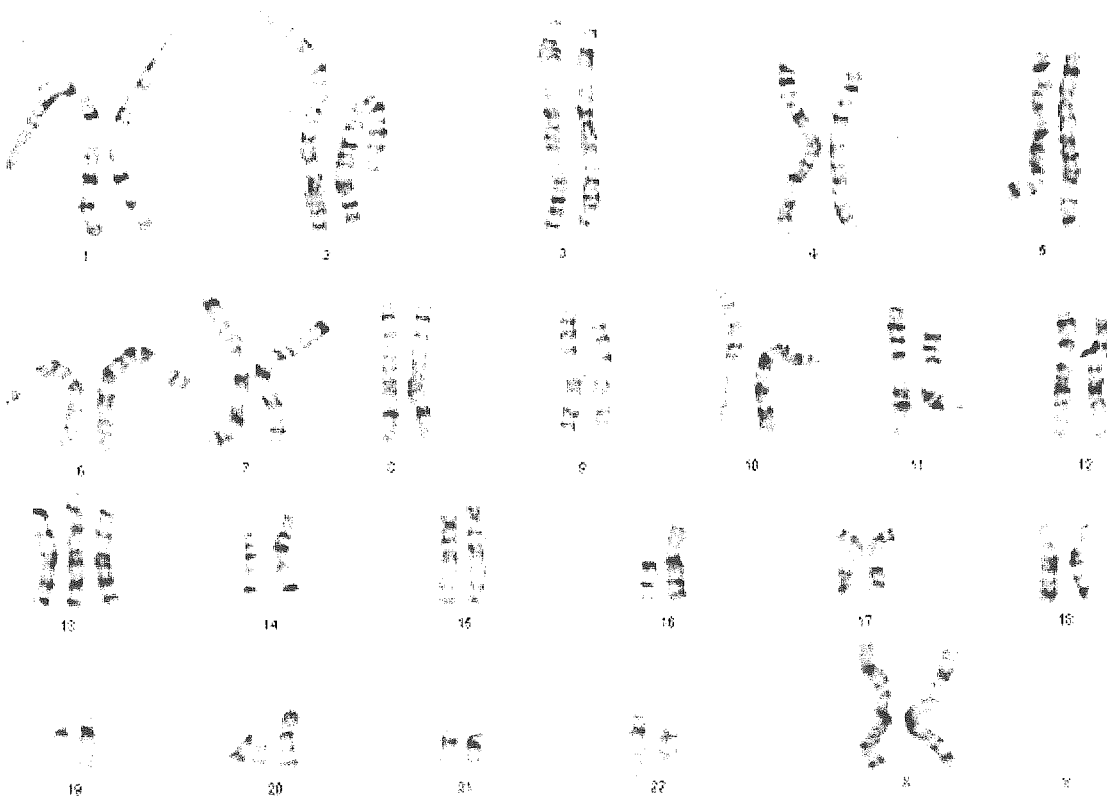
Karyotype: 46,XY

Patient A's Karyotype:



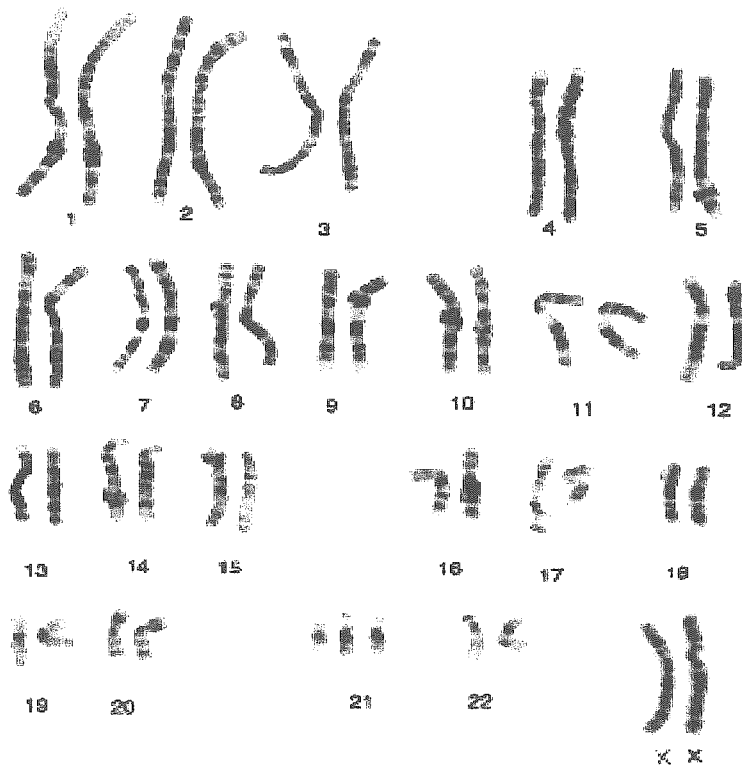
1. What gender is the patient?
2. How many chromosomes are present in this patient?
3. Are any chromosomes duplicated or deleted? If so, which chromosome?
4. Does this patient have a disorder? If so, which disorder?

Patient B's Karyotype:



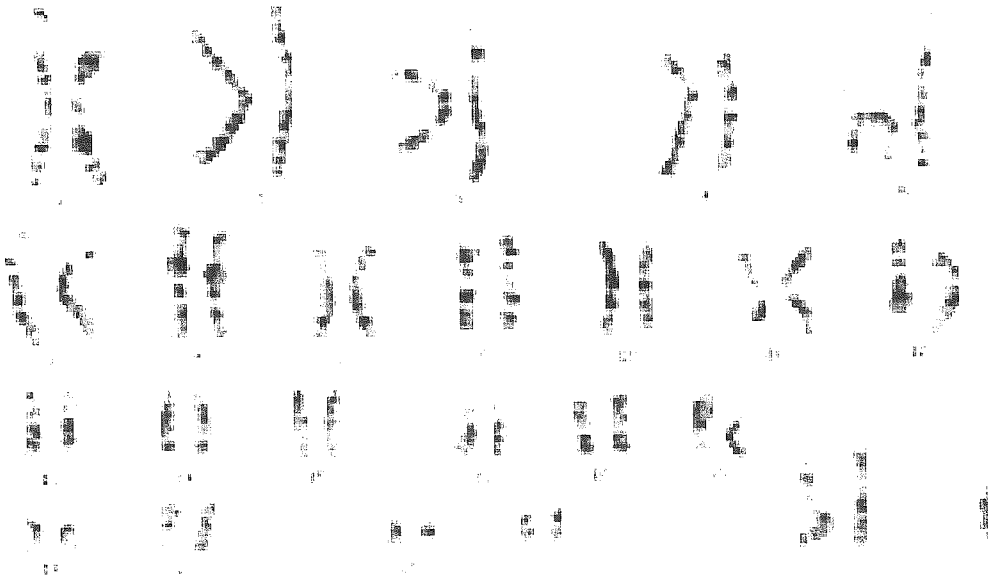
1. What gender is the patient?
2. How many chromosomes are present in this patient?
3. Are any chromosomes duplicated or deleted? If so, which chromosome?
4. Does this patient have a disorder? If so, which disorder?

Patient C's Karyotype:



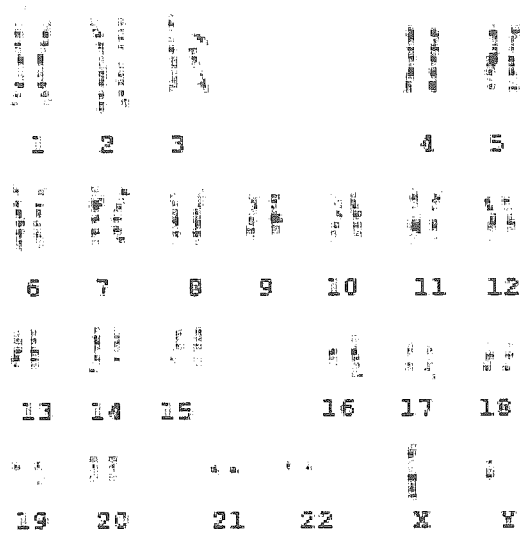
1. What gender is the patient?
2. How many chromosomes are present in this patient?
3. Are any chromosomes duplicated or deleted? If so, which chromosome?
4. Does this patient have a disorder? If so, which disorder?

### Patient D's Karyotype



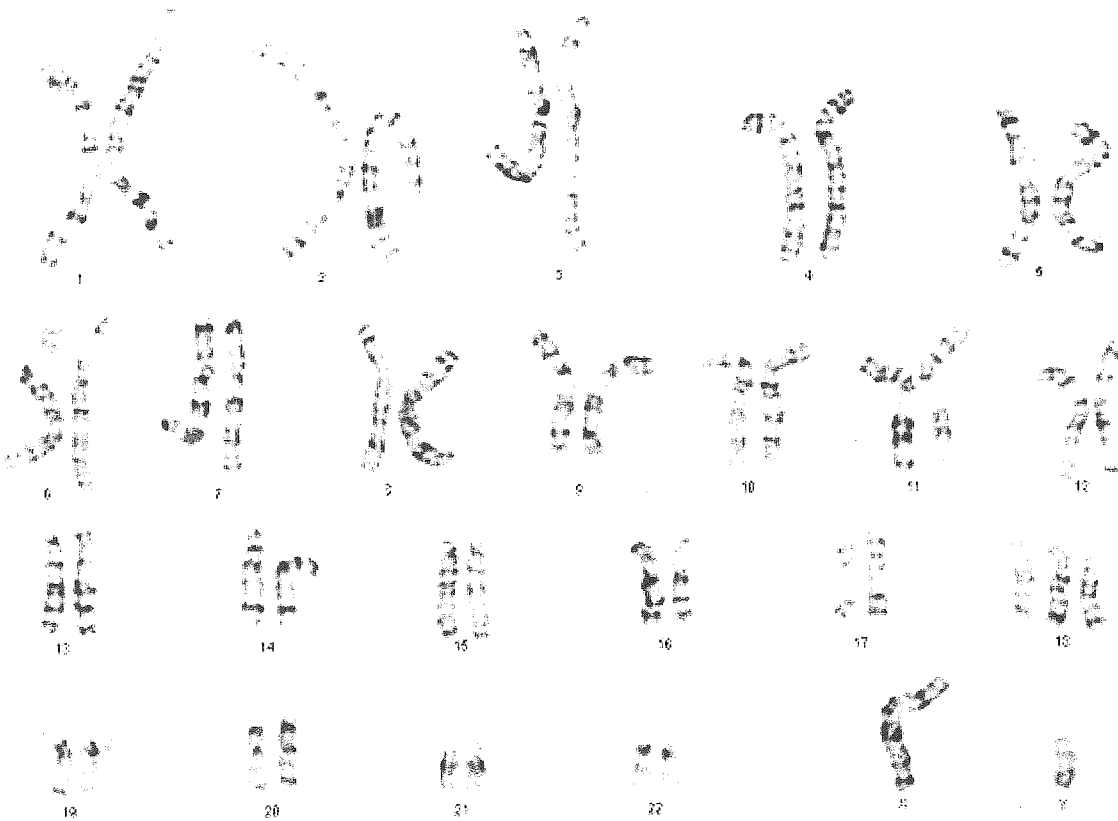
1. What gender is the patient?
2. How many chromosomes are present in this patient?
3. Are any chromosomes duplicated or deleted? If so, which chromosome?
4. Does this patient have a disorder? If so, which disorder?

### Patient E's Karyotype



1. What gender is the patient?
  
2. How many chromosomes are present in this patient?
  
3. Are any chromosomes duplicated or deleted? If so, which chromosome?
  
4. Does this patient have a disorder? If so, which disorder?

## Patient F's Karyotype



1. What gender is the patient?
2. How many chromosomes are present in this patient?
3. Are any chromosomes duplicated or deleted? If so, which chromosome?
4. Does this patient have a disorder? If so, which disorder?