

Name _____

Period _____

Karyotype Lab

Data Sheet

1. Use correct notation to describe your patient's karyotype.
2. Use the case history, karyotype, and medical information under **Making a diagnosis** to diagnose your patient's problem. Explain your answer below.

3. Discuss the diagnoses of the other patients with your classmates. Use correct notation to describe their chromosomes and write the diagnoses for all patients in the **Patient List** below.

Patient A

Chromosomes from blood drawn from five-day-old baby. Baby appears to have slight facial deformities and has been diagnosed with an atrial heart defect.

Notation _____ Diagnosis _____

Patient B

Chromosomes from blood drawn from nine-year-old. Patient has hearing loss in right ear, noted speech impairments, and slight mental retardation.

Notation _____ Diagnosis _____

Patient C

Chromosomes from a tissue sample taken from a deceased baby. Baby lived only three days, and was born with permanently clinched hands, small mouth, and a fluid-filled sac at the back of the neck.

Notation _____ Diagnosis _____

Patient D

Chromosomes from the amniotic fluid of a pregnant 40-year-old female. Gestational age of fetus is 14 weeks. (Amniotic fluid contains skin cells from the fetus.)

Notation _____ Diagnosis _____

Patient E

Chromosomes from blood drawn from a 26-year-old female. Patient and husband are unable to conceive and are seeking answers to infertility problem. Patient is amenorrheic and has a short stature.

Notation _____ Diagnosis _____

Patient F

Chromosomes from the blood of a 22-year-old. Patient has small testes and evidence of the formation of breasts. Patient has been reported to have behavioral problems and tests show an IQ of 85. Blood levels reveal a low level of testosterone.

Notation _____ Diagnosis _____

Glossary of Medical Terms

Amenorrheic- without menstruation, not having a menstrual period

Amniotic fluid- the fluid surrounding the fetus within the uterus

Atrial heart defect- a malformation of the upper region of the heart

Deformity- malformation of a part of the body

Fetus- the unborn baby from 9 weeks after fertilization to birth

Genotype- the genetic make-up of an organism

Gestational age- the age of the fetus from fertilization

Infertility- difficulty or inability to conceive a child

Mental retardation- below-average intelligence or functioning

Speech impairment- difficulty in producing speech sounds

Sterile- unable to conceive a child

Testosterone- the major male hormone, produced by the testes