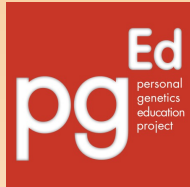


Accommodating Sex and Gender Differences in Genomics Laboratories

Exploring Difference in the Biology Classroom

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Ina E. Amarillo, PhD FACMG ErCLG (she/hers)
Director, Cytogenetics and Molecular Path Lab
Associate Professor, Pathology and Lab Medicine



PennState Health



PennState
College of Medicine

iamarillo1@pennstatehealth.psu.edu

Twitter: @chromosomeOMICS

Encounter with Genetics and Genomics Health Care Providers



Medical Team
Suspicion for a genetic
condition?
Other reasons?

Inclusive Gathering and Recording of Patient Information

2. Your Information				
Date of Birth:	Month:	Day:	Year:	Social Security Number:
Legal Name:	First:	Middle Initial:	Last:	
	Preferred Name:			
Address:	Street Address:		Apartment No.:	D.C. Ward (if you know):
	City:		State:	Zip Code:
	Is your housing?: <input type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Temporary			
Whitman-Walker will send you mail to the above address. We believe it important to communicate with you, and at times, we do mail information.				
Gender identity:	Do you identify as transgender?	Sexual Orientation:	Race:	Ethnicity:
<input type="checkbox"/> Man <input type="checkbox"/> Woman <input type="checkbox"/> Trans Man <input type="checkbox"/> Trans Woman <input type="checkbox"/> Genderqueer/Non-binary <input type="checkbox"/> _____	<input type="checkbox"/> Yes <input type="checkbox"/> No Gender Pronoun: <input type="checkbox"/> He/Him/His <input type="checkbox"/> She/Her/Hers <input type="checkbox"/> They/Them/Their <input type="checkbox"/> _____	<input type="checkbox"/> Lesbian, Gay, Homosexual <input type="checkbox"/> Straight or Heterosexual <input type="checkbox"/> Bisexual <input type="checkbox"/> _____	<input type="checkbox"/> African American/Black (including Africa, Caribbean) <input type="checkbox"/> Caucasian/White (including Middle Eastern) <input type="checkbox"/> American Indian or Alaska Native (including all Original Peoples of the Americas) Asian (please specify) <input type="checkbox"/> Asian Indian <input type="checkbox"/> Chinese <input type="checkbox"/> Filipino <input type="checkbox"/> Japanese <input type="checkbox"/> Korean <input type="checkbox"/> Vietnamese <input type="checkbox"/> Other Asian Native Hawaiian/Pacific Islander (please specify) <input type="checkbox"/> Native Hawaiian <input type="checkbox"/> Guamanian or Chamorro <input type="checkbox"/> Other Pacific Islander	<input type="checkbox"/> Non-Hispanic/Non-Latino Hispanic/Latino (please specify) <input type="checkbox"/> Mexican Mexican American Chicano/a <input type="checkbox"/> Puerto Rican <input type="checkbox"/> Cuban <input type="checkbox"/> Another Hispanic Latino/a Spanish Origin
Sex assigned at birth:				
<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Intersex <input type="checkbox"/> _____				

Variations in Sex Characteristics (VSC)
Differences of Sex Development (DSD)

People with Variations in Sex Characteristics (VSC) DSD/Intersex (beyond dimorphism)

Sex Chrom	Reproductive Structures Hormones
XX	with testis, or both ovary and testis missing or underdeveloped uterus, vagina, cervix, ovary absence of menstruation too much androgen
XY	with uterus, fallopian tube underdeveloped or undescended testis underdeveloped Leydig or Sertoli cells absent or reduced formation or action of androgen
XX/XY	ovary and testis

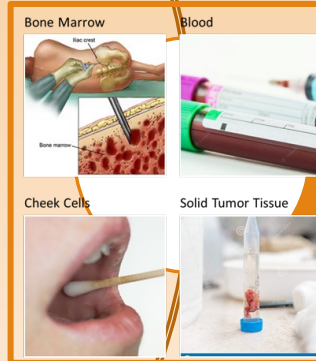
Encounter with Health Care Providers

Return of
Results



Medical Team

Suspicion for a genetic condition?

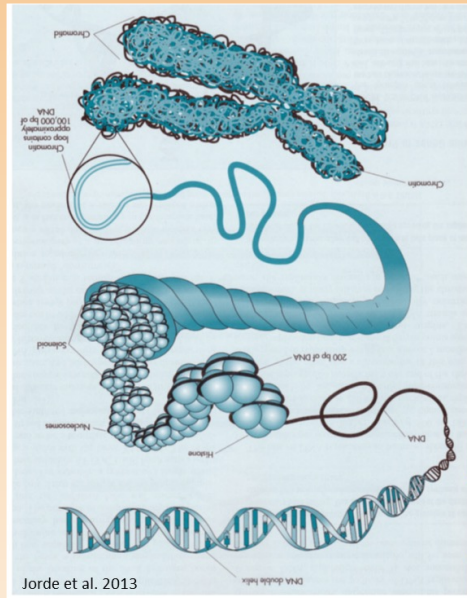


Send tissue samples to Genomics Lab



Lab Results/Reports

Testing for genomic variations from DNA to chromosome



Karyotyping

Fluorescence In Situ Hybridization (FISH)

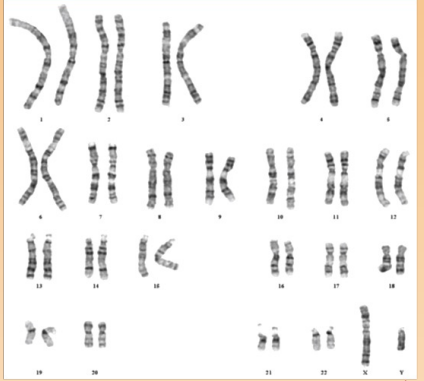
Chromosome Microarray Analysis (CMA)

Gene and Genome Sequencing

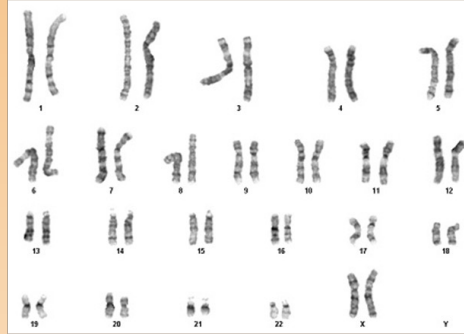
Reasons for Testing

- ❖ Sex chromosome determination
 - ❖ number and structure of X and Y chromosomes, and *SRY*
- ❖ Sex chromosome test ***is not*** requested but automatically included in written reports

Inclusive and Affirmative Reporting of Karyotype or FISH Results

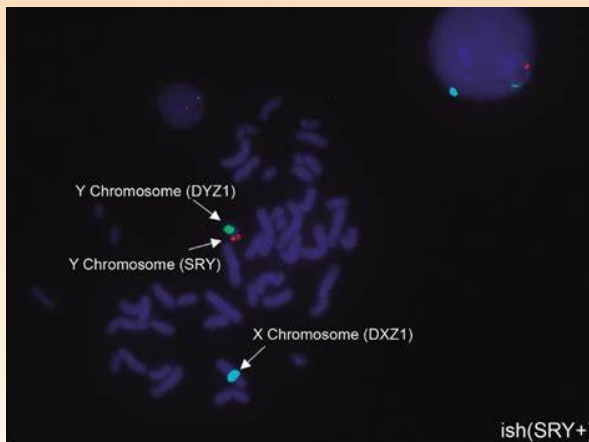


Karyotype 46,XY



46,XX

FISH



Sex Chrom	Sex at Birth	Gender Identity
XX	Female VSC/DSD/Intersex	Cis-female transman gender-expansive/nonbinary/trans* agender
XY	Male VSC/DSD/Intersex	Cis-male transwoman gender-expansive/nonbinary/trans* agender
Others 45,X (Turner syndrome) 47,XXY (Klinefelter syndrome) Mosaic – 45,X/46,XY Chimera – 46,XY/46,XX		

Affirmative Reporting of Results

Individuals with XX and *SRY* (sex-determining region in Y)

SRY, Yp11.3, FISH

Result Summary MCR

Abnormal

Interpretation MCR

The male sex-determining region of the Y chromosome, *SRY*, is present and translocated to the short arm of an X chromosome in this phenotypic male with a 46,XX karyotype.

These findings are typically associated with infertility (Delot and Vilain, Nonsyndromic 46,XX Testicular Disorders of Sex Development. In: GeneReviews: www.ncbi.nlm.nih.gov/books/NBK1416/ accessed on 02/02/2022).

A genetic consultation may be of benefit. Specialists in sex chromosome variations are available at [REDACTED]. To speak to one of our specialists and/or refer a patient, please call the Department of Clinical Genomics at 800-533-1564.

Result MCR

ish der(X)t(X;Y)(p22.3;p11.3;)(*SRY*+,DXZ1+)

SRY hybridized to the short arm of the X chromosome and DXZ1 to the X centromere in ten metaphase cells.

Positive
Language

- Intersex
- **Variations** in Sex Characteristics (VSC)
- **Differences** of Sex Development

Better
Designations

- Report sex chromosomes and its variants **without** categorizing as “normal/abnormal” and “male/female”
- XX, XY, X, XXX, XXY

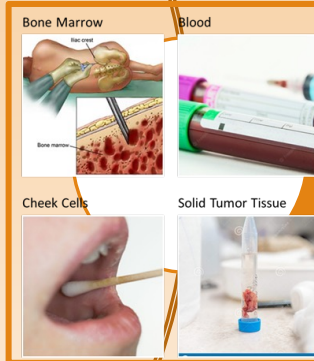
Return Inclusive and Affirmative Results to Health Care Providers

Return of
Results



Medical Team

Suspicion for a genetic condition?



Send tissue samples to Genomics Lab



Lab Results/Reports

Thank you!

Resources

[Educating Children - InterConnect Support](#)

[The 2018 Model School District Policy on Transgender and Gender Nonconforming Students | National Center for Transgender Equality \(transequality.org\)](#)

[Youth & Students | National Center for Transgender Equality \(transequality.org\)](#)

[Home – DSDteens](#) and [Home :: DSD Families](#)

[Educating Educators | GLSEN](#)

[Resources: Teaching Intersex Health and Sex Education in Schools - interACT: Advocates for Intersex Youth \(interactadvocates.org\)](#)

[interACT-Chromosome Letter \(interactadvocates.org\)](#)