Hannam
fertility centre

Facsimile Transmittal

To: LMC Clinic - Endocrinology
From: Dr. Paul Robb OHIP# 029011
Re: Michael Fusco

Date: 2025-Oct-24
Fax: 1 (905) 763-0708
Pages: 11

☐ Urgent ☐ For review ☐ Confidential ☐ Please reply

Comments:

Hi team,

Please see attached referral.

Thank you!

In partnership with
Dr. Kim Garbedian
Dr. Ashley Gilman
Dr. John Hannam
Dr. Shannon Moore
Dr. Carol Redmond
Dr. Paul Robb
Dr. Harpal Atwal
Dr. Karen Dee
Dr. Carrie Schram
Dr. Nada Labor
Dr. Taran Yeomans
Eileen McMahon NP
160 Bloor Street East
15th Floor
Toronto Ontario
M4W 3R2
Call Us 905 475 5151
Fax 1 (905) 763-0708
info@hannamfertility.com
hannamfertility.com

Dr. Paul Robb, MD FRCSC

Hannam Fertility Centre, 160 Bloor Street East, 15th Floor, Toronto, ON M4W 3R2
Phone: (416) 595-1521, Fax: (416) 506-0680, hannamfertility.com

REFERRAL LETTER

Date: 2025-Oct-23

Referred to: LMC Endocrinology

Referred from: Dr. Paul Robb
Hannam Fertility Centre
(OHIP# 029011)

Patient Name: Michael Fusco
HC#: 6568 486 333PE; DOB: 1988-Jan-09
120 Branigan Cres, Georgetown, ON L7G 0M8
Home #: (647) 207-0616
michael.fusco16@gmail.com

Request / Procedure (Reason for consultation or reason for referral):

Please see Michael, a 37 Yr male for Kleinfelter's variant.

See relevant results attached.

Thank you for your time and attention.

Sincerely,

Paul Robb, MD FRCS(C)
Hannam Fertility Centre
Electronically Reviewed to Expedite Delivery

For any clinical queries, please email: paul.robb@hannamfertility.com
CC: Michael Fusco

Enclosures (8)

Dynacare®

FAX

TO: DR.P. ROBB

COMPANY: HANNAM FERTILITY CENTRE

FAX NUMBER: 416 506-0680

PHONE NUMBER:

RE: CHROMOSOME

FROM: Dynacare

FAX NUMBER: 9052875720

DATE: 2025-09-30

TOTAL NO. OF PAGES INCLUDING COVER: 4

NOTES/COMMENTS:

Fusco, Michael DOB: **01/09/1988** **Patient Report**

Patient ID: **GDML00015669199** Age: **37** Account Number: **54000250**

Specimen ID: **237-000-9231-0** Sex: **Male** Ordering Physician: **P ROBB**

125 811

Date Collected: **08/21/2025** Date Received: **08/25/2025** Date Reported: **09/26/2025** Fasting: **Not Given**

Ordered Items: **Chromosome, Blood, Routine; FISH Microdeletion; Count 15-20 cells, 2 Karyotype; Chromosome Blood Routine 88230; FISH Met Analysis 10-30 x1; FISH Probe 88271 X2**

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FUSCO MICHAEL

General Comments & Additional Information

Clinical Info: SRC:BLOOD
Per Dr. Paul Robb, test code 510770, Fluorescence in situ Hybridization (FISH), Microdeletion Syndromes, was added on 9.25.2025

DR.ROBB,PAUL
HANNAM FERTILITY CENTRE 1500-160 BLOOR S
TORONTO ON
M4W3R2

2025/08/21 08:50:00 Actual.

Date Collected: **08/21/2025**

Chromosome, Blood, Routine

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Specimen Type[01]	Comment: BLOOD			
Cells Counted[01]	20			
Cells Analyzed[01]	20			
Cells Karyotyped[01]	2			
GTG Band Resolution Achieved[01]	500			
Cytogenetic Result[01]	Comment: 46,XX (SEE BELOW)			
Interpretation[01]	Comment: VARIANT KLINEFELTER SYNDROME Cytogenetic analysis of GTG banded metaphases revealed a chromosome complement with two X chromosomes. The presence of two X chromosomes in a phenotypic male with testicular dysfunction is usually consistent with a micro-translocation involving the transfer of the testicular determining gene (SRY) to one of the X chromosomes. FISH confirmed the presence of SRY gene on the short arm of X chromosome (see FISH result). These results are consistent with a variant form of Klinefelter syndrome. Some phenotypic features of KLINEFELTER syndrome include tall stature, infertility, gynecomastia, etc. Genetic counseling is recommended. Technical Component-Processing performed at 1904 TW Alexander Dr, Research Triangle Park, NC 27709, Labcorp CLIA 34D1008914. Medical Director, Anjen Chenn, M.D., Ph.D. Technical Component- Partial chromosome analysis performed at JJHOA18, LabCorp 7207 North Gessner Suite 101, Houston TX 77040, CLIA 45D0674994, Laboratory Director, Venkateswara R Potluri PhD. Technical Component- Partial chromosome analysis performed at BTHOA26, LabCorp 7207 North Gessner Suite 101, Houston TX 77040, CLIA 45D0674994, Laboratory Director, Venkateswara R Potluri PhD.			
Director Review:[01]	Comment: Inder K. Gadi, PhD, FACMG, Professional Component performed by Laboratory Corporation of America Holdings, CLIA			

Fusco, Michael DOB: **01/09/1988**
Patient ID: **GDML00015669199** Age: **37**
Specimen ID: **237-000-9231-0** Sex: **Male**

Patient Report
Account Number: **54000250**
Ordering Physician: **P ROBB**

labcorp

Date Collected: **08/21/2025**

50 29523951
FUSCO MICHAEL

2025/08/21 08:50:00 Actual.

Chromosome, Blood, Routine (Cont.)

34D1008914, 1904 TW Alexander Dr, RTP, NC 27709. Medical Director, Anjen Chenn, MD,PhD

PDF

FISH Microdeletion

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Specimen Type 01	Comment: BLOOD			
Cells Counted 01	120			
Cells Analyzed 01	120			
FISH Result 01	Comment: SRY GENE SIGNAL OBSERVED ON THE SHORT ARM OF X CHROMOSOME			
Interpretation 01	Comment: VARIANT KLINEFELTER SYNDROME 46,XX.ish der(X)t(X;Y)(p22.3;p11.3)(DXZ1+,SRY+) Fluorescence in situ hybridization (FISH), using a unique sequence DNA probe specific for the testes determining region (SRY Vysis, Inc.), showed an SRY hybridization signal at the short arm terminus of the X chromosome. The X chromosome was positively identified using an internal control probe specific for the X chromosome centromere (DXZ1, Vysis Inc.). This confirms a micro-translocation involving the transfer of the testicular determining gene (SRY) to one of the X chromosomes in this male patient with two X chromosomes (46,XX, see cytogenetic). The SRY gene protein product is associated with the initiation and development of male sex. The absence of the Y chromosome long arm and spermatogenesis genes is associated with azoospermia.. These results are consistent with a variant form of Klinefelter syndrome. Some phenotypic features of Klinefelter syndrome include infertility, gynecomastia, etc. Genetic counseling is recommended. FISH results should be interpreted within the context of a full cytogenetic analysis, family history, and clinical phenotype.. This test was developed and its performance characteristics determined by Laboratory Corporation of America Holdings (LabCorp). It has not been cleared or approved by the U.S. Food and Drug Administration.			
Director Review: 01	Comment: Inder K. Gadi, PhD, FACMG, Professional Component performed by Laboratory Corporation of America Holdings, CLIA 34D1008914, 1904 TW Alexander Dr, RTP, NC 27709. Medical Director, Anjen Chenn, MD,PhD			

Fusco, Michael DOB: **01/09/1988**

Patient ID: **GDML00015669199** Age: **37**

Specimen ID: **237-000-9231-0** Sex: **Male**

Patient Report

Account Number: **54000250**

Ordering Physician: **P ROBB**

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Disclaimer

The Previous Result is listed for the most recent test performed by Labcorp in the past 5 years where there is sufficient patient demographic data to match the result to the patient. Results from certain tests are excluded from the Previous Result display.

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FUSCO MICHAEL

Icon Legend

▲ Out of Reference Range ■ Critical or Alert

Performing Labs

01: YU - Labcorp RTP, 1904 TW Alexander Drive Ste C, RTP, NC 27709-0153 Dir: Anjen Chenn, MDPhD

For inquiries, the physician may contact Branch: 800-762-4344 Lab: 800-762-4344

2025/08/21 08:50:00 Actual.

Patient Details
Fusco, Michael
, , OT

Phone:
Date of Birth: **01/09/1988**
Age: **37**
Sex: **Male**
Patient ID: **GDML00015669199**
Alternate Patient ID: **GDML00015669199**

Physician Details
P ROBB
Gamma Dynacare Medical Lab
115 Midair Court, Brampton Ontario, OT, 1GT 5M3

Phone: **519-640-1200**
Account Number: **54000250**
Physician ID:
NPI:

Specimen Details
Specimen ID: **237-000-9231-0**
Control ID: **2952395101**
Alternate Control Number: **2952395101**
Date Collected: **08/21/2025 0850 Local**
Date Received: **08/25/2025 0000 ET**
Date Entered: **08/25/2025 1134 ET**
Date Reported: **09/26/2025 1435 ET**

Integrated GENETICS
LabCorp Specialty Testing Group

Client/Sending Facility:
Gamma Dynacare Medical Lab
CET Testing
115 Midair Court
Brampton Ontario, OT L6T-5M3
Ph: (519)640-1200
NCB-13

LCLS Specimen Number:	**237-000-9231-0**	Account Number:	54000250
Patient Name:	**FUSCO, MICHAEL**	Ordering Physician:	**P ROBB**
Date of Birth:	01/09/1988	Specimen Type:	**BLOOD**
Gender:	M	Client Reference:	
Patient ID:	GDML00015669199	Date Collected:	08/21/2025
Lab Number:	YU25-95991 FL	Date Received:	08/26/2025
Indications:	NOT GIVEN	Date Reported:	**09/26/2025**

Test: **Chromosome, Blood, Routine**

Cells Counted:	20	Cells Karyotyped:	2
Cells Analyzed:	20	Band Resolution:	500

CYTOGENETIC RESULT: 46,XX (SEE BELOW)

INTERPRETATION: VARIANT KLINEFELTER SYNDROME

Cytogenetic analysis of GTG banded metaphases revealed a chromosome complement with two X chromosomes. The presence of two X chromosomes in a phenotypic male with testicular dysfunction is usually consistent with a micro-translocation involving the transfer of the testicular determining gene (SRY) to one of the X chromosomes. FISH confirmed the presence of SRY gene on the short arm of X chromosome (see FISH result). These results are consistent with a variant form of Klinefelter syndrome. Some phenotypic features of KLINEFELTER syndrome include tall stature, infertility, gynecomastia, etc. **Genetic counseling is recommended.**

Technical Component-Processing performed at 1904 TW Alexander Dr, Research Triangle Park, NC 27709, Labcorp CLIA 34D1008914. Medical Director, Anjen Chenn, M.D., Ph.D.

Technical Component- Partial chromosome analysis performed at JJHOA1B, LabCorp 7207 North Gessner Suite 101, Houston TX 77040, CLIA 45D0674994, Laboratory Director, Venkateswara R Potluri PhD.

Technical Component- Partial chromosome analysis performed at [illegible], LabCorp 7207 North Gessner Suite 101, Houston TX 77040, CLIA 45D0674994, Laboratory Director, Venkateswara R Potluri PhD.

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LabCorp Specialty Testing Group

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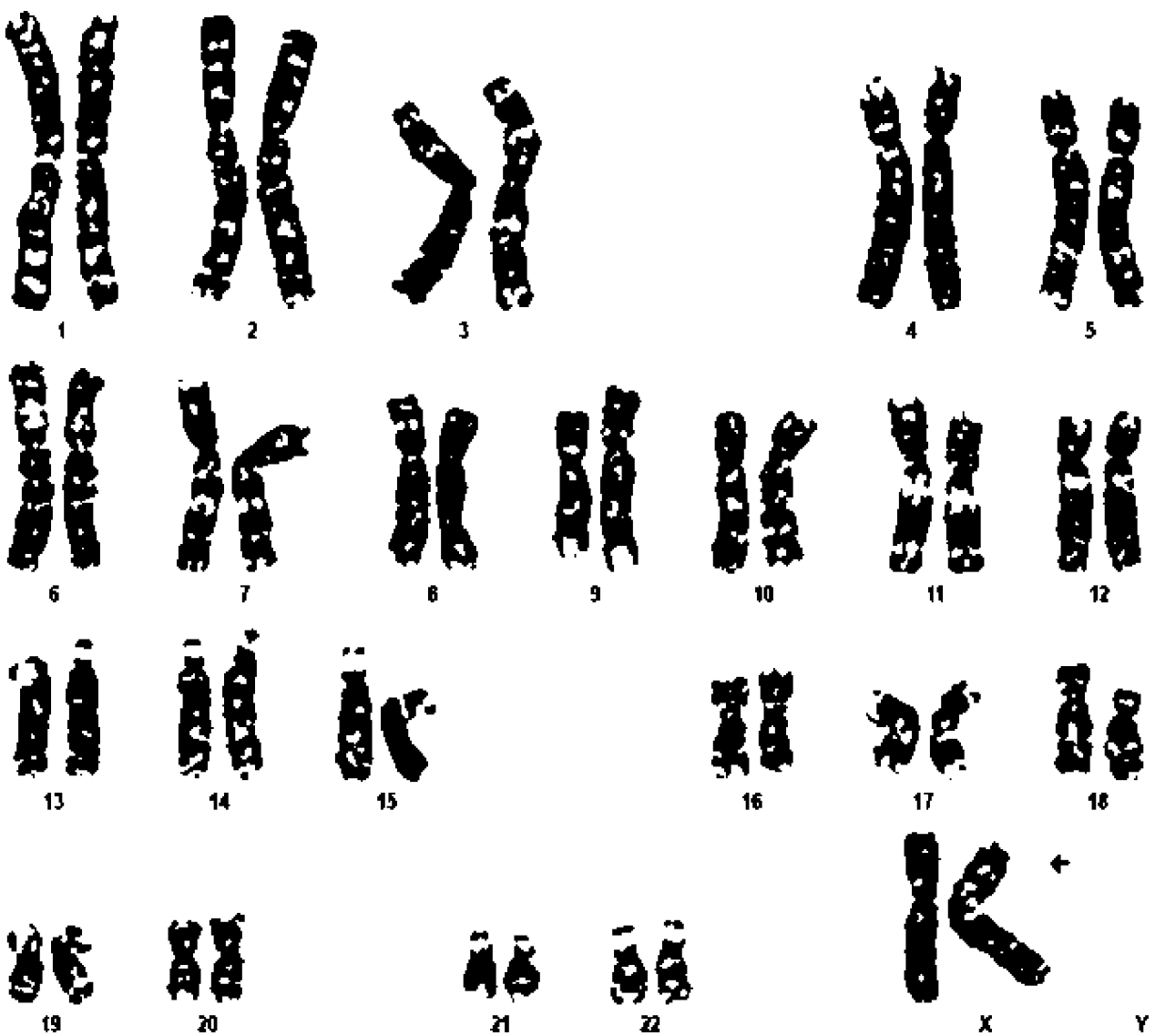
Brampton Ontario, OT L6T-5M3
Ph: (519)640-1200
NCB-13

LCLS Specimen Number:	**237-000-9231-0**	Account Number:	54000250
Patient Name:	**FUSCO, MICHAEL**	Ordering Physician:	**P ROBB**
Date of Birth:	01/09/1988	Specimen Type:	**BLOOD**
Gender:	M	Client Reference:	
Patient ID:	GDML00015669199	Date Collected:	08/21/2025
Lab Number:	YU25-95991 FL	Date Received:	08/26/2025



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Brampton Ontario, OT L6T-5M3
Ph: (519)640-1200
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LCLS Specimen Number:	**237-000-9231-0**	Account Number:	54000250
Patient Name:	**FUSCO, MICHAEL**	Ordering Physician:	**P ROBB**
Date of Birth:	01/09/1988	Specimen Type:	**BLOOD**
Gender:	M	Client Reference:	
Patient ID:	GDML00015669199	Date Collected:	08/21/2025
Lab Number:	YU25-95991 FL	Date Received:	08/26/2025
Indications:	NOT GIVEN	Date Reported:	**09/26/2025**
Test:	**FISH Microdeletion**		
Cells Counted:	120	Cells Analyzed:	120

FISH RESULT: SRY GENE SIGNAL OBSERVED ON THE SHORT ARM OF X CHROMOSOME

INTERPRETATION: VARIANT KLINEFELTER SYNDROME

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

Fluorescence in situ hybridization (FISH), using a unique sequence DNA probe specific for the testes determining region (SRY Vysis, Inc.), showed an SRY hybridization signal at the short arm terminus of the X chromosome. The X chromosome was positively identified using an internal control probe specific for the X chromosome centromere (DXZ1, Vysis Inc.). This confirms a micro-translocation involving the transfer of the testicular determining gene (SRY) to one of the X chromosomes in this male patient with two X chromosomes (46,XX, see cytogenetic). The SRY gene protein product is associated with the initiation and development of male sex. The absence of the Y chromosome long arm and spermatogenesis genes is associated with azoospermia.

These results are consistent with a variant form of Klinefelter syndrome. Some phenotypic features of Klinefelter syndrome include infertility, gynecomastia, etc. **Genetic counseling is recommended.**

FISH results should be interpreted within the context of a full cytogenetic analysis, family history, and clinical phenotype.

This test was developed and its performance characteristics determined by Laboratory Corporation of America Holdings (LabCorp). It has not been cleared or approved by the U.S. Food and Drug Administration.

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Brampton Ontario, OT L6T-5M3
Ph: (519)640-1200
NCB-13

LCLS Specimen Number:	**237-000-9231-0**	Account Number:	54000250
Patient Name:	**FUSCO, MICHAEL**	Ordering Physician:	**P ROBB**
Date of Birth:	01/09/1988	Specimen Type:	**BLOOD**
Gender:	M	Client Reference:	
Patient ID:	GDML00015669199	Date Collected:	08/21/2025
Lab Number:	YU25-95991 FL	Date Received:	08/26/2025

Inder K. Gadi, PhD, FACMG

Anjen Chenn, M.D., Ph.D.
Medical Director

Technical component performed by Laboratory Corporation of America Holdings,
1904 TW Alexander Drive , RTP , NC , 27709-0153 (800) 345-4363

Professional Component performed by Laboratory Corporation of America Holdings, CLIA 34D1008914, 1904 TW Alexander Dr, RTP, NC 27709, Medical Director, Anjen Chenn, MD,PhD

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