



**Egg Freezing Insights**  
Image-based AI assessment of egg quality for cryopreservation

Clinic Logo Here

## Valentina's Personalized Egg Quality Assessment

### Patient

**Patient ID** 123456  
**Patient Name** Valentina González  
**Date of Birth** 19 Aug 1996  
**Date of Report** 08 Oct 2024

### Clinic

**Doctor** Maria García Ramírez  
**Clinic** Future Fertility Clinic  
**Phone** (123) 456-7890  
**Email** info@clinic.com

### Report

**Date of Retrieval** 07 Oct 2024  
**Age at Retrieval** 28 years old  
**# of Mature Oocytes** 12

**VIOLET™** is an image-based AI tool that assesses *oocyte* (egg) quality and provides a personalized probability for each oocyte. A higher probability indicates greater chances of an oocyte to develop into a *blastocyst* (day 5-7 embryo) and to be *euploid* (23 pairs of chromosomes).



### Oocytes Evaluated

Number of Mature Oocytes Evaluated

12 MATURE OOCYTES

Assessed by VIOLET™



### Blastocyst Prediction

Predicted # of Day 5-7 Embryos

Personalized chances of your eggs successfully thawing and developing *blastocyst* embryos.

AT LEAST 1 BLASTOCYST

97%

PROBABILITY

MOST LIKELY OUTCOME

3-4

BLASTOCYSTS

# OF BLASTOCYSTS	0	1-2	3-4	5-6	7-9	10-12
PROBABILITY	3%	14%	80%	2%	1%	0%



### Euploidy Prediction

Predicted # of Euploid Blastocysts

Personalized chances of your eggs successfully thawing and developing *euploid* blastocysts.

AT LEAST 1 EUPLOID

68%

PROBABILITY

MOST LIKELY OUTCOME

1-2

EUPLOIDS

# OF EUPLOIDS	0	1-2	3-4	5-6	7-9	10-12
PROBABILITY	3%	78%	16%	2%	1%	0%



### Live Birth Prediction

Potential to Have a Baby

Personalized chances of having a baby (*live birth*) from your retrieved eggs based on VIOLET™ assessment and statistical modelling.

AT LEAST 1 LIVE BIRTH

46%

PROBABILITY

AT LEAST 2 LIVE BIRTHS

14%

PROBABILITY

Your personalized VIOLET™ prediction for having at least 1 baby is **LOWER THAN AVERAGE**

Compared to 56-69% predictions from generic live birth calculators that are based only on your age (28y) & number of mature oocytes frozen (12).

### Comparison to Age Average

To Have at Least 1 Baby



### Valentina's Egg Images & AI Predictions

Patient ID 123456  
Patient Name Valentina González  
Date of Birth / Age 19 Aug 1996 / 28y

Egg images shown at 20-40x magnification, include probability of becoming a blastocyst embryo & euploid blastocyst. Not all eggs reach blastocyst stage & fewer will become euploid. Euploidy prediction threshold is 28%.

- ≥28% are more likely to result in a euploid
- <28% are less likely to result in a euploid

#### Straw 1 | 1 of 3

Egg 1



**71%**  
BLASTOCYST



**40%**  
EUPLOID



Egg 2



**43%**  
BLASTOCYST



**25%**  
EUPLOID



Egg 3



**35%**  
BLASTOCYST



**21%**  
EUPLOID



#### Straw 2 | 2 of 3

Egg 4



**19%**  
BLASTOCYST



**6%**  
EUPLOID



Egg 5



**83%**  
BLASTOCYST



**49%**  
EUPLOID



Egg 6



**14%**  
BLASTOCYST



**11%**  
EUPLOID





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Straw 3 | 3 of 3

Egg 7



55%  
BLASTOCYST



\* 38%  
EUPLOID



Egg 8



21%  
BLASTOCYST



17%  
EUPLOID



Egg 9



77%  
BLASTOCYST



45%  
EUPLOID



Egg 10



25%  
BLASTOCYST



18%  
EUPLOID



Egg 11



19%  
BLASTOCYST



14%  
EUPLOID



Egg 12



44%  
BLASTOCYST



29%  
EUPLOID





## Patient Resources



### Oocyte Retrieval

Retrieve & assess mature oocytes following ovarian stimulation

### Oocyte Freezing & Thawing

Mature oocytes are cryopreserved & thawed when ready to be used

### Fertilization

Mature oocytes are fertilized with sperm



### Assess & Transfer Blastocyst

Embryos that reach **blastocyst** stage may be tested for **euploidy** and selected for transfer / freezing

### Implantation

Embryo implants into uterine lining as determined by serum blood test

### Clinical Pregnancy

Detection of fetal sac & heartbeat from ultrasound



### Live Birth

Successful delivery of a baby

## How Our AI Model Works

### The Science Behind the AI Predictions



Mature Oocyte



AI-Based Segmentation

- VIOLET™ AI non-invasively analyzes mature oocyte cell structures and minuscule, pixel-level image details.
- A "mask" automatically segments critical areas of the cell for the AI model to assess.
- The model applies patterns and learnings from a database of 650k+ images and real-life developmental outcomes from clinics across the world to calculate personalized predictions for each of your oocytes.

## Find More Resources Online



- Read our scientific research publications
- Find more FAQs
- View our blog posts
- And much more!

[futurefertility.com/violet-my-report](https://futurefertility.com/violet-my-report)

## Definitions

- **Mature Oocyte** An egg that is fully developed & ready to be fertilized by sperm.
- **Blastocyst** Embryo development stage that occurs between days 5-7 after fertilization.
- **Euploid Blastocyst** A blastocyst embryo that contains the correct number of chromosomes (23 pairs) & is correlated with greater chances of pregnancy success.
- **Semen Analysis** Sperm evaluation based on sample concentration, motility, & morphology.
- **Receptive Uterus** Lining of uterus is in ideal condition for an embryo to implant.
- **Live Birth** Successful delivery of a baby.

## Frequently Asked Questions

### Why does VIOLET™ only analyze mature oocytes?

Mature oocytes (eggs) have completed the developmental stages to enable fertilization and are therefore suitable for egg freezing and VIOLET™ analysis.

### Why is blastocyst development and euploidy important to consider in egg freezing?

Reaching the blastocyst stage is a key milestone because these embryos have a higher chance of implantation when they are transferred into the uterus. Euploid blastocysts are considered chromosomally normal embryos, having 23 pairs of chromosomes, and have lower rates of genetic errors and are more likely to develop into a healthy baby. It is important to remember that even euploid blastocyst may not result in a live birth, because of other processes and factors that need to occur to support implantation and ultimately a successful pregnancy.

### How is the live birth prediction determined?

Your live birth prediction is based on (1) your personalized egg quality assessed by VIOLET™ and (2) statistical modelling which accounts for impacts of egg freezing and thawing, as well as the euploidy predictions which influence your chances of reaching live birth. The prediction estimates the chances that you will have at least one or two babies from all the eggs you froze.

### How does the live birth prediction impact my fertility planning?

Your unique prediction is compared to a standard approach of calculating live birth which uses only your age group and total number of eggs. If the live birth prediction is lower than expected, you may decide to pursue additional egg freezing cycles to increase your cumulative chance of success. If you pursue multiple cycles, Future Fertility provides a complimentary VIOLET™ summary report with updated calculations based on your eggs and their unique predictions.

**650k+**  
Oocyte Images

WORLD LEADING  
DATASET

**7**  
Scientific Papers

PUBLISHED IN PEER  
REVIEWED JOURNALS

**100+**  
Abstracts

AT ACADEMIC  
CONFERENCES

**300+**  
Clinics

ACROSS 35+  
COUNTRIES

**4**  
Patient Awards

FOR INNOVATION IN  
FERTILITY CARE



## Disclaimer & Additional Information

VIOLET™ is an AI-based predictive model consisting of an ensemble of custom deep neural networks trained to analyze 2D images of oocytes to predict blastocyst development and ploidy status [1-3]. Outcome predictions are based on proprietary technology combining VIOLET™ image analysis (Oocytes > Blastocysts and Ploidy) and statistical modeling (Euploid blastocyst > Live Birth) [4-9]. Assessments may be affected by image quality and assume a normal semen analysis, without specific uterine receptivity issues.

Future Fertility strives to provide the most precise results using state-of-the-art technologies and software development. VIOLET™ is not intended to substitute professional medical advice or replace the patient-doctor consultation. Please speak to your health care provider about your circumstances prior to making any decisions. Commercially available as per: CE Mark, Health Canada, MHRA & ANVISA. ISO 13485, HIPAA and GDPR compliant. For investigational use only in USA. IRB Tracking Number: 2021-2732-6559-2. Patent [futurefertility.com/en/virtual-patent-marking](https://futurefertility.com/en/virtual-patent-marking)

Looking for the articles we reference? Have a look at our research from the QR Code above

## Feedback & Support

For questions or ideas, please contact our Customer Support team  
[support@futurefertility.com](mailto:support@futurefertility.com)

For clinical inquiries, please contact our Medical Director  
[md@futurefertility.com](mailto:md@futurefertility.com)

## Version

Violet Cryo R5.0 | OBv3.0 & OEv3.0 | RPv3.0