

# Proportion of unidentified early pregnancy loss in a population of women trying to conceive

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## Introduction

The rate of recognised miscarriages is approximately 20%. This may under-represent the true figure, as it only considers loss after pregnancy recognition. We aimed to determine the extent of unrecognised early pregnancy loss in women trying to conceive.

## Methods

- Prospective longitudinal study
- Recruited 3,113 women aged 18 years and older who were actively trying to conceive
- Volunteers collected daily urine samples from day 1 of their next cycle until either pregnancy was established or the start of their next cycle was confirmed
- Luteinising hormone (LH) was measured by AutoDELFIA® to determine ovulation day (day following LH surge)
- Human chorionic gonadotrophin (hCG) was measured in the luteal phase (AutoDELFIA®)

## Results

Population demographics are shown in Table 1.

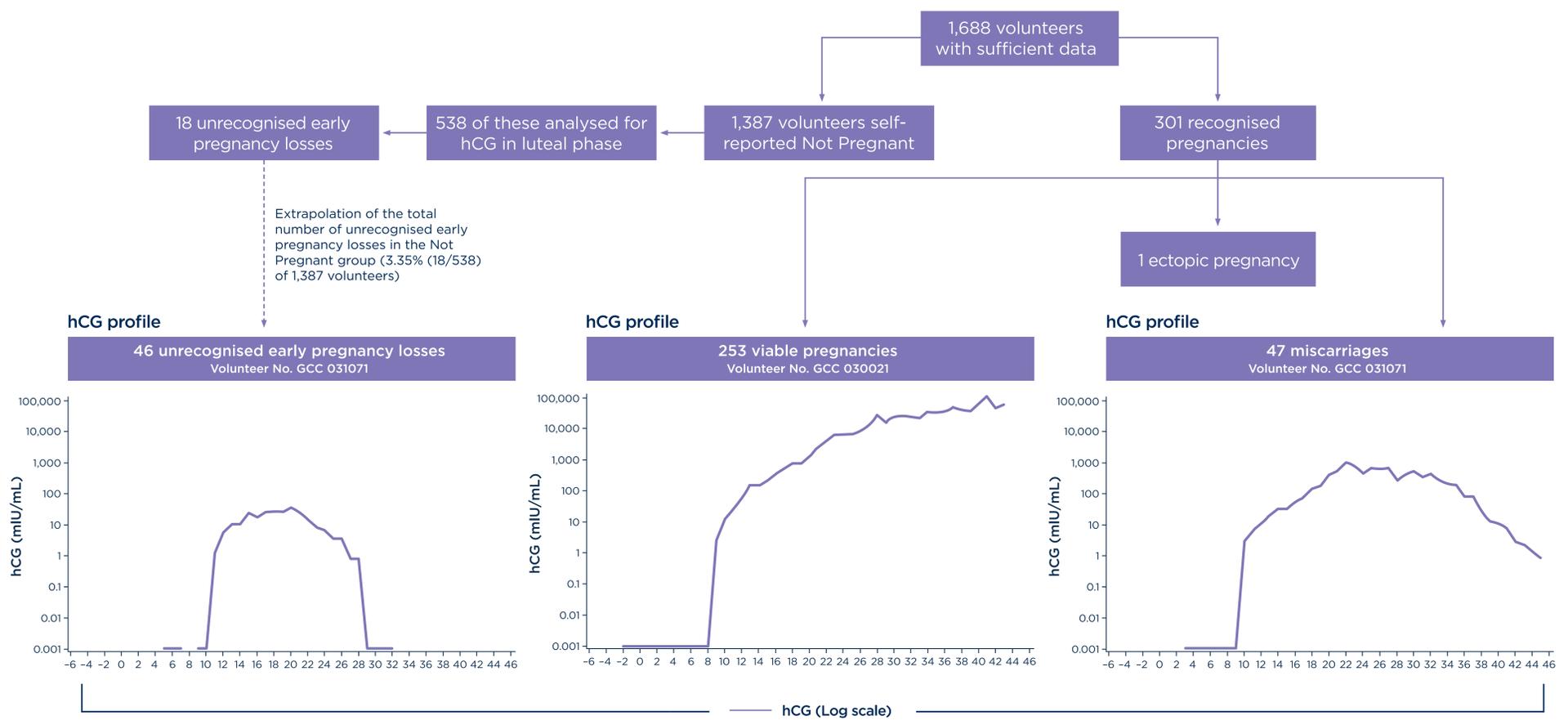
**Table 1: Demographic of total of answered questions. Median age was 30 years (range 18–47) and volunteers had been trying to conceive for a median of 6 months (range 0–252)**

Age	n	%	Months trying to conceive	n	%	Number of previous live births	n	%
18–25	576	18.8	0–3	870	28.7	None	1,345	44.4
26–30	1,029	33.6	4–6	684	22.6	1	1,132	37.3
31–35	944	30.8	7–12	641	21.2	2+	554	18.3
36–40	392	12.8	13–24	509	16.8	-	-	-
41–45	117	3.8	25–36	161	5.3	-	-	-
>45	3	0.1	>36	165	5.4	-	-	-
Total	3,061	100	Total	3,030	100	Total	3,031	100

Of the volunteers with adequate data for the study cycle (n=1,688), 301 volunteers reported pregnancy (17.8%) (confirmed by quantitative hCG levels measured by AutoDELFIA®); of these, 47 were miscarriages (15.6% of recognised pregnancies) and there was one ectopic pregnancy.

A random selection of 538 'Not Pregnant' volunteers cycles were analysed for hCG prior to volunteer reported menses. Of these, 18 (3.35%) had a rise and subsequent fall of hCG suggestive of unrecognised early pregnancy loss. This would equate to 46 women from the entire Not Pregnant group, therefore being almost equal to the number of recognised pregnancy losses, for a total number of 347 conceptions.

**Figure 1: The classification of pregnancy groups and associated hCG profiles for the differing groups.**



## Conclusions

- Our study estimates 3.35% of Not Pregnant cycles in women seeking to conceive are actually unrecognised early pregnancy losses. Based on this, of the total number of conceptions:
  - 13.2% ended in unrecognised early pregnancy loss
  - 13.5% ended in recognised early pregnancy loss
- Conception rates are also lower in this population, probably due to subfertility as many had been trying to conceive for several months
- However, unrecognised early pregnancy loss is common and could be mistaken for failure to conceive, making it a possible cause of unexplained infertility.

### Declaration of Interest

Sarah Johnson and Lorrae Marriott are employees of SPD Development Company Ltd, a wholly owned subsidiary of SPD Swiss Precision Diagnostics GmbH; the manufacturers of Clearblue Pregnancy and Fertility Tests. The study was funded by SPD Development Company Ltd.