

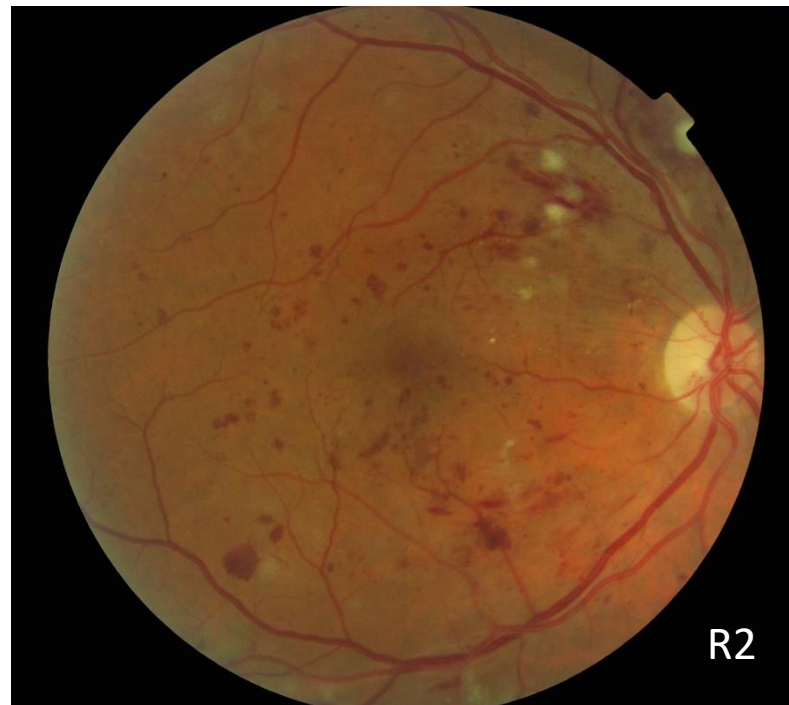
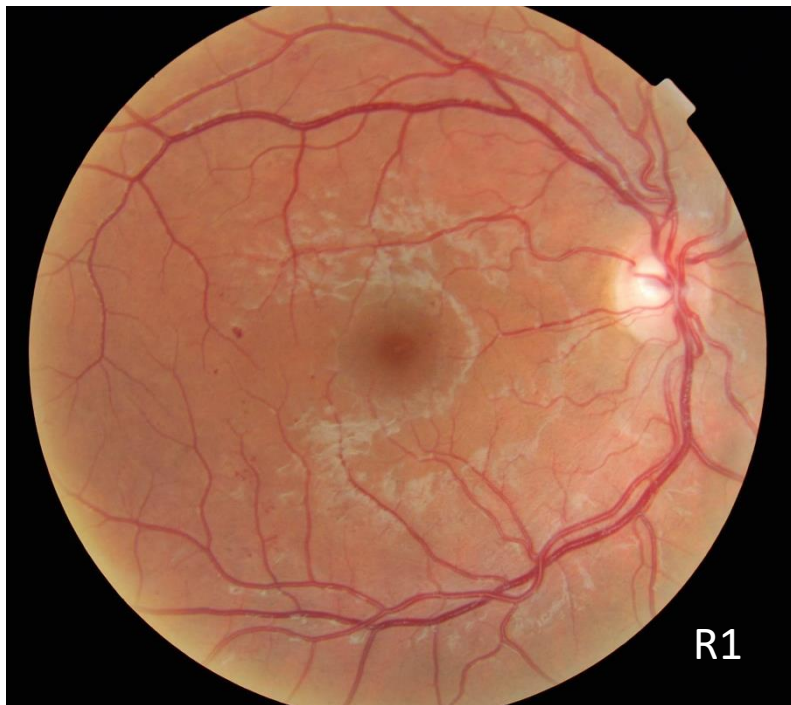
Why is screening so important in Pregnancy?

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Diabetic retinopathy is a progressive disease .

Can progress from R1 to R2 and R3 with no symptoms



Pregnancy and Diabetes

- Can double the rate of progression of diabetic retinopathy _{1,2}
- Especially In type 1 patients
- **Risk factors** include:
 1. Retinopathy levels at conception
 2. Metabolic Control
 3. Duration of Diabetes prior to pregnancy

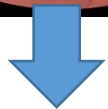
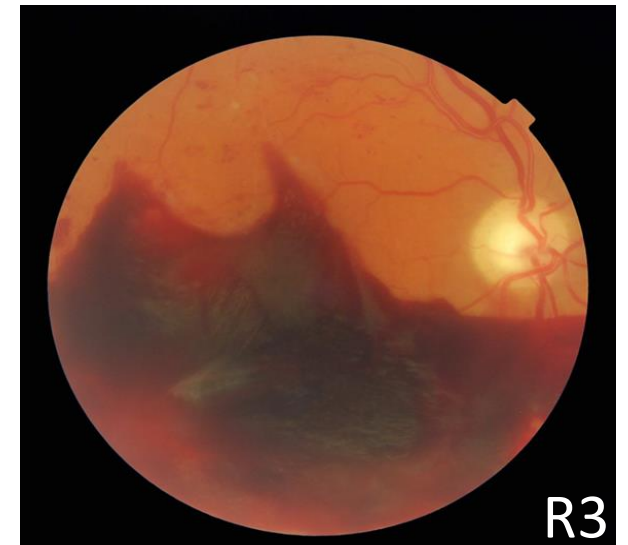
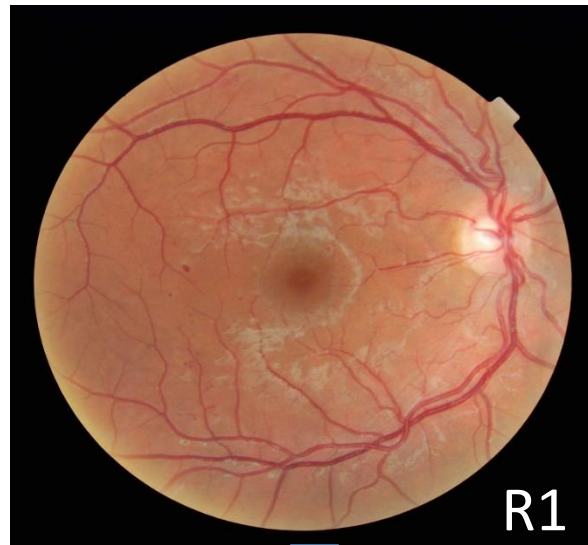
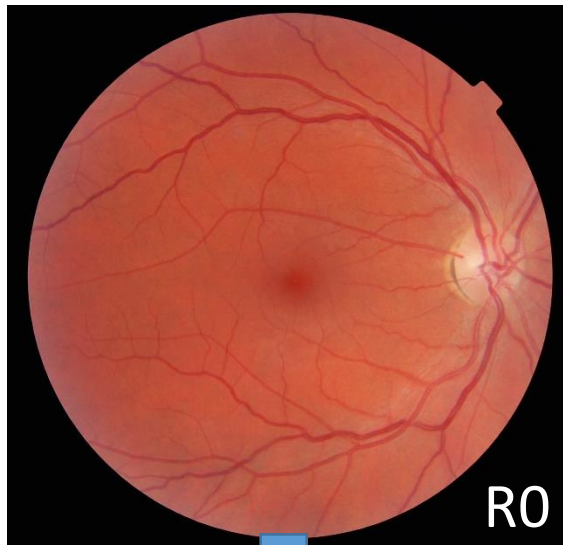


(1) RM Best & U Chakravarthy. Diabetic retinopathy in pregnancy. BJO. 1997 Volume 81: 249-251

(2) Diabetes in early pregnancy (1995) Metabolic control and progression of retinopathy. Diabetes Care 18:631-637

Retinopathy Levels at Baseline

Advanced stages more difficult to treat. Often need Vitrectomy surgery +/- injection treatment (CI in pregnancy)



12% will progress to R1

6.3% progress to R3

29 % progress to R3

MILD NON-PROLIFERATIVE



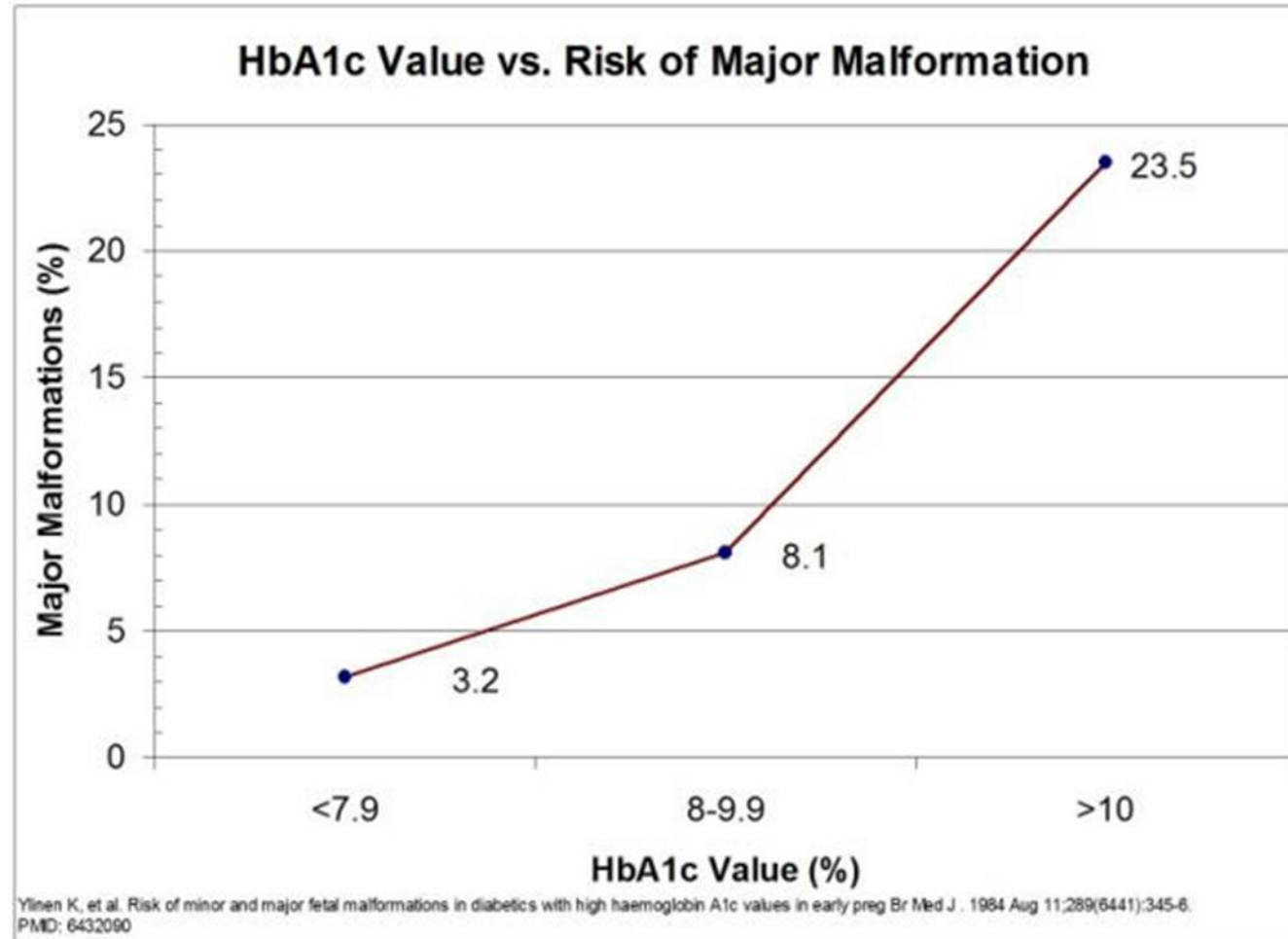
PROLIFERATIVE

Metabolic Control and retinopathy levels

- Reduction in HbA1c- important for health of mother and fetus. Reduces miscarriages, stillbirths, congenital anomalies, obstetric complications ₁.
- All those with **R3 at the start of pregnancy** developed pregnancy induced hypertension and obstetric complications
- Those with **greatest reduction in HbA1c** over the first 14 weeks of pregnancy = **greater progression of retinopathy** (DIEP study₂)
- Women should aim for HbA1c of 43 mmol/mol (6.1%) before and during 1st trimester (NICE guidance₃)

1) National Pregnancy in Diabetes Audit Report, 2016 2) Diabetes in early pregnancy (1995) Metabolic control and progression of retinopathy. Diabetes Care 18:631-637 3) NICE Guidance

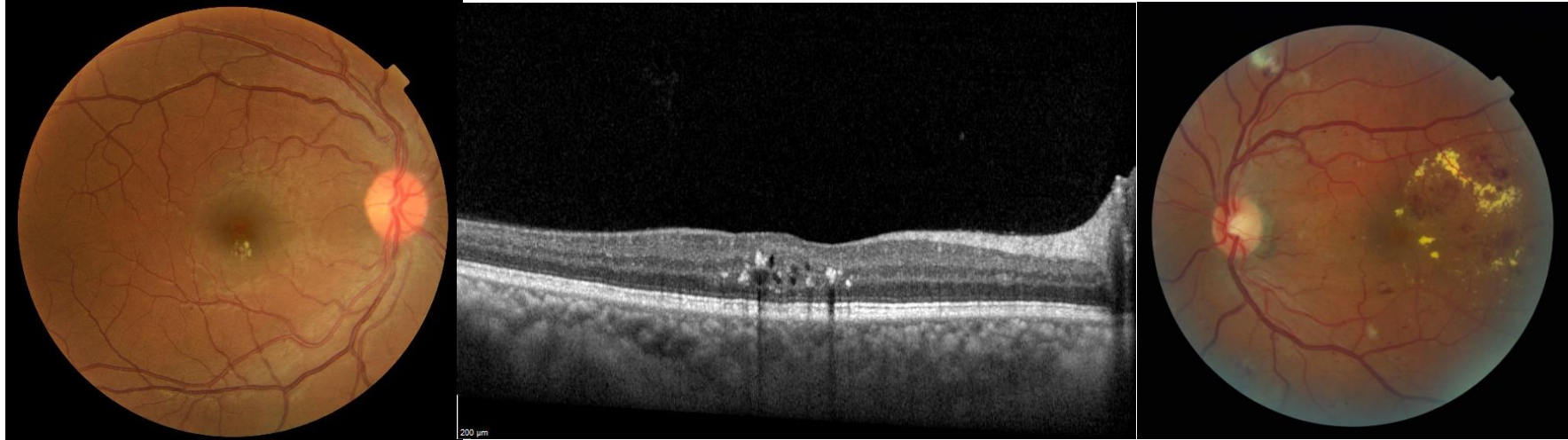
Congenital malformation is higher with poor HbA1c control



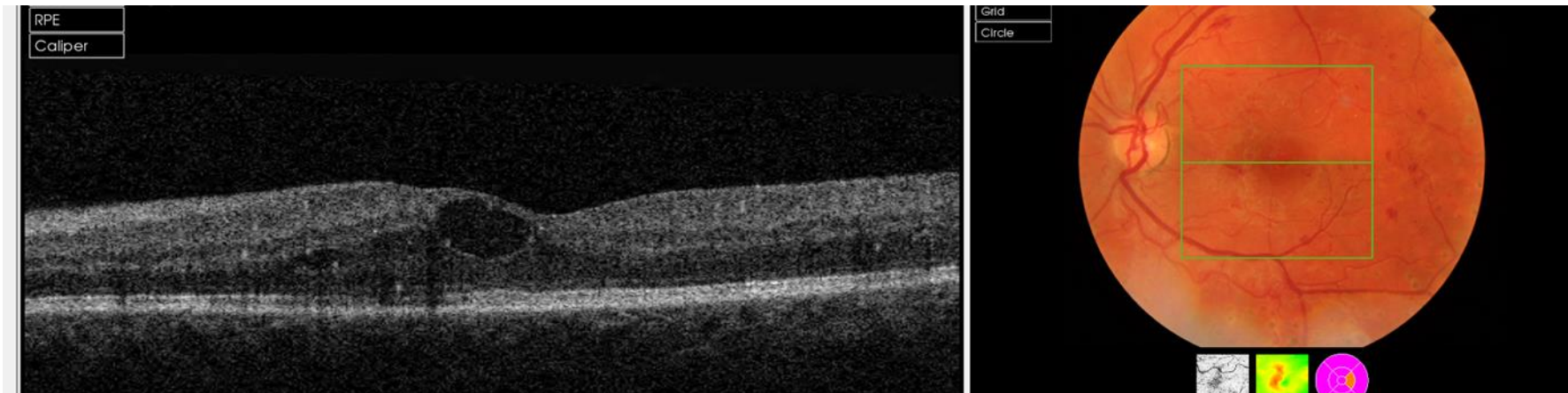
Duration of diabetes

- DIEP study (2) - retinopathy progressed to proliferative levels(R3) in
 - 39% of patients > 15 years of diabetes
 - 18% of patients < 15 years
 - Not as important as baseline retinopathy

Maculopathy can also worsen in pregnancy



Some women
require laser
treatment
(safe in pregnancy)



Some changes can
improve spontaneously
after the delivery and
doesn't always need
treating

Case J

- Young teacher aged 22
- Seen 2011 in screening. Minimal retinopathy R1M0 both eyes



Case J

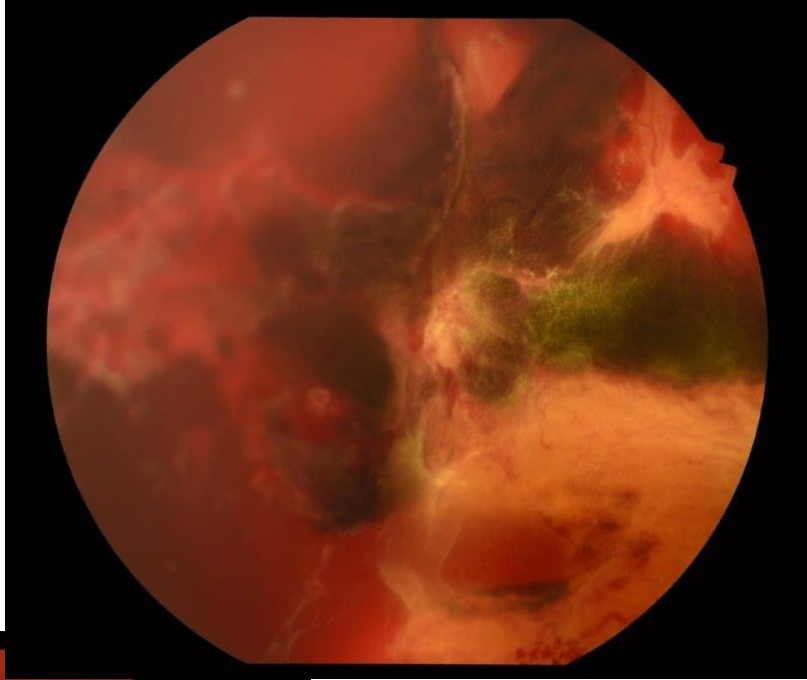
- Did not attend any appointments between 2011-2016
- Was pregnant in 2016 with a difficult pregnancy and lots of hospital visits (st elsewhere)
- Did not at any point have eye checks despite eye screening dept being in the same building

Case J

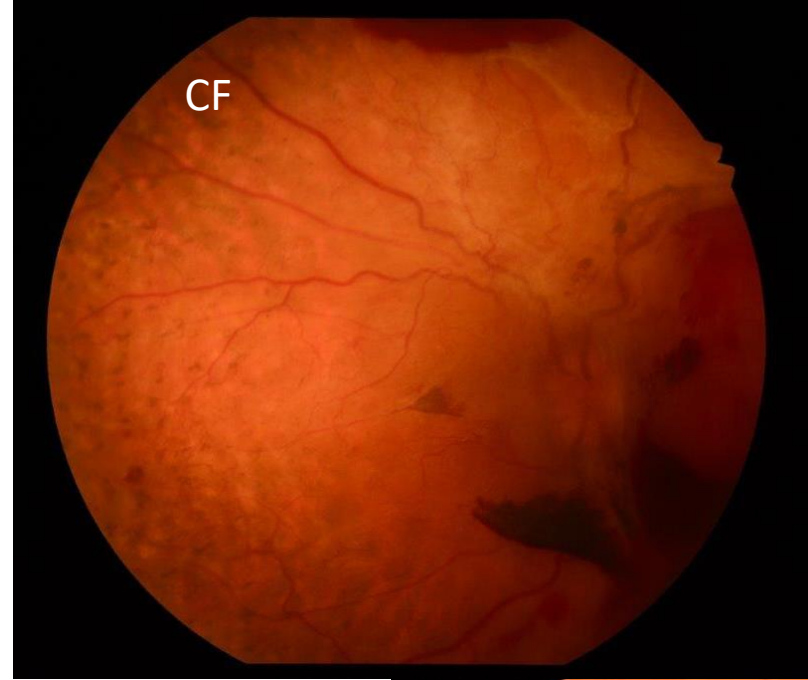
- Unfortunately lost the pregnancy due to complications with the fetus
- She had poorly controlled diabetes
- Aug 2016- started getting increasing floaters
- Attended an Eye Cas dept – VA 6/9 and 6/6
- Bilateral R3 despite Urgent PRP Laser- eye disease progressed
- Re-presented in November 2016 with sudden loss of vision in the RE (HM) and large haemorrhage in the left eye (CF)
- Referred to STH

Nov 2016

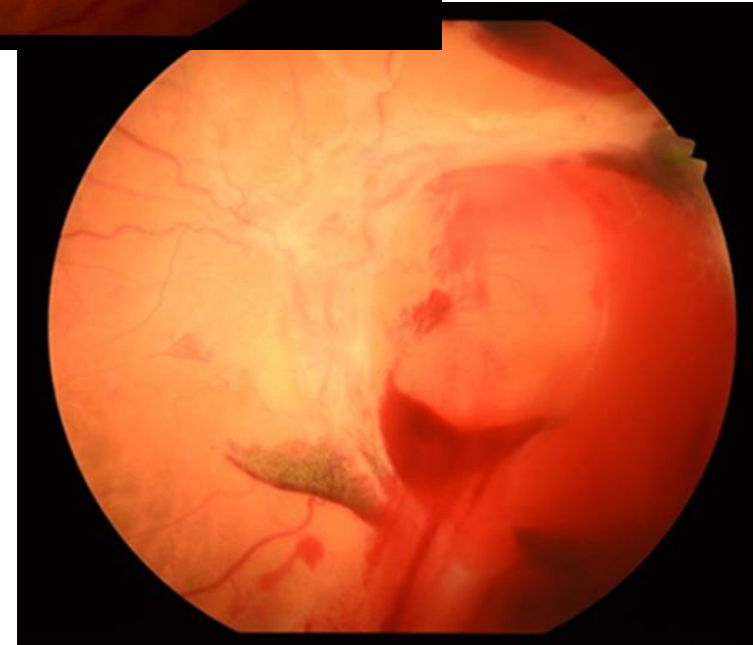
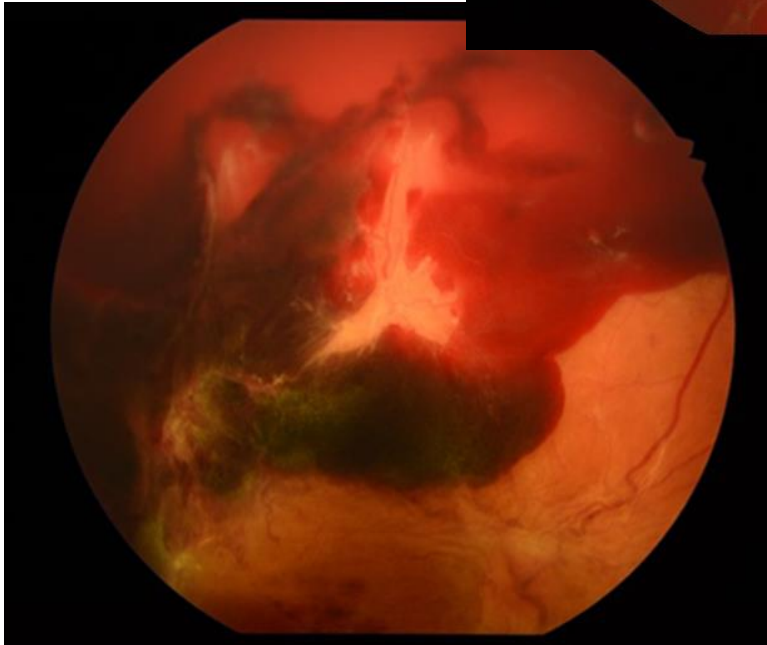
RE-
HM



CF



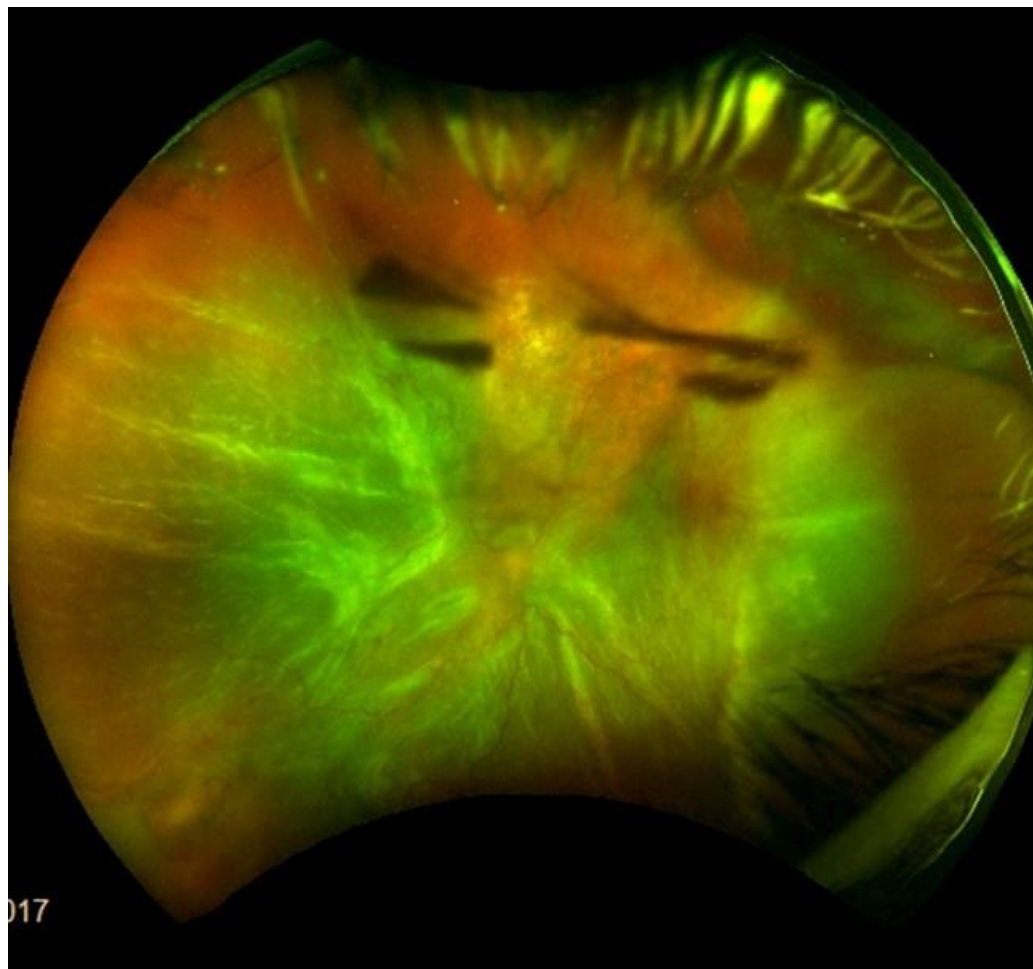
LE-
CF



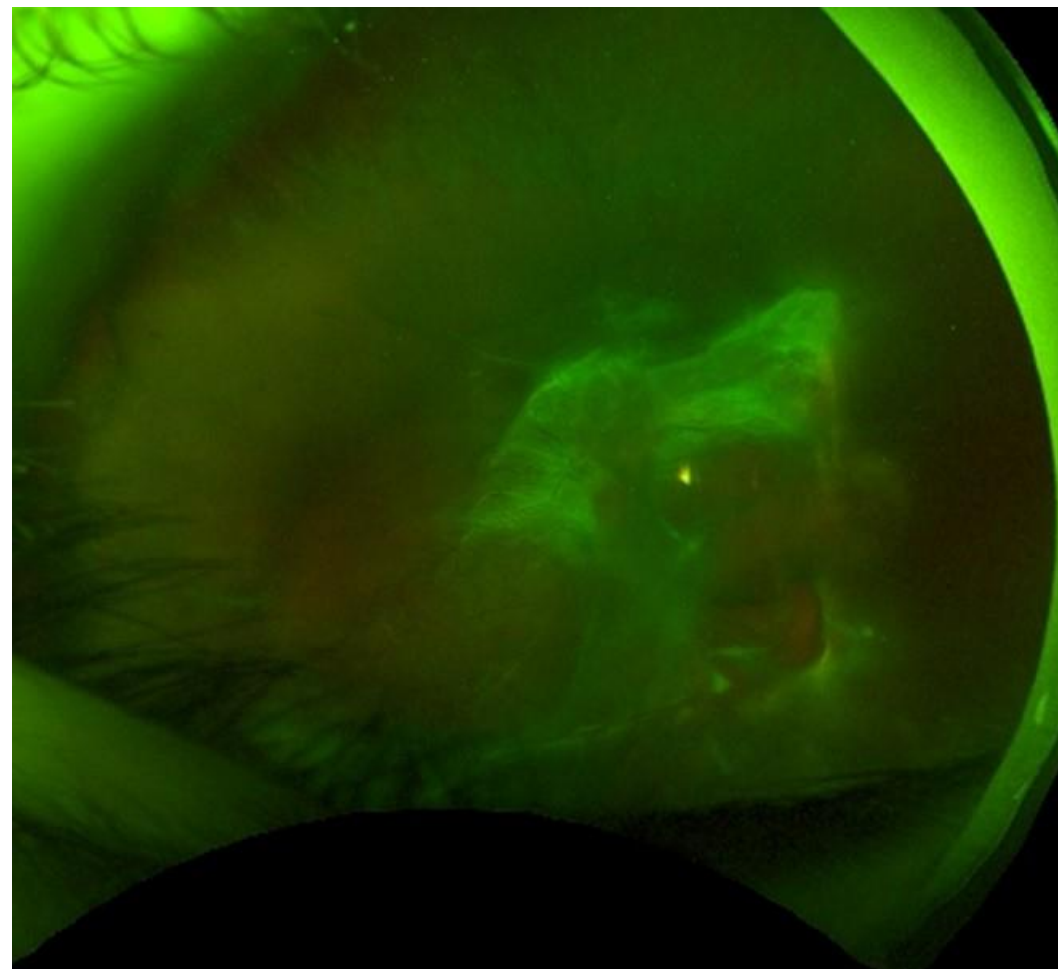
Case J

- **December 2016- Went on to have- Right eye vitrectomy, delamination and laser**
- **January 2017 -Second operation for Right repair of Tractional Retinal Detachment with silicone oil**
- **March 2017-Left vitrectomy, delamination and laser with left cataract surgery**
- **Some vision preserved in the left eye (6/18) but blind right eye (HM). Also silicone oil remains in right eye.**

Jan 2017 Post op RE And Pre-op LE



HM



6/24

April 2018- post vitrectomies

HM

6/18



May 2019-

Right eye White cataract

Left eye has now improved to 6/12

Are pregnant women being referred
for their diabetic eye screen in time?
Are we meeting NICE guidance?

Gurnoor Nagi

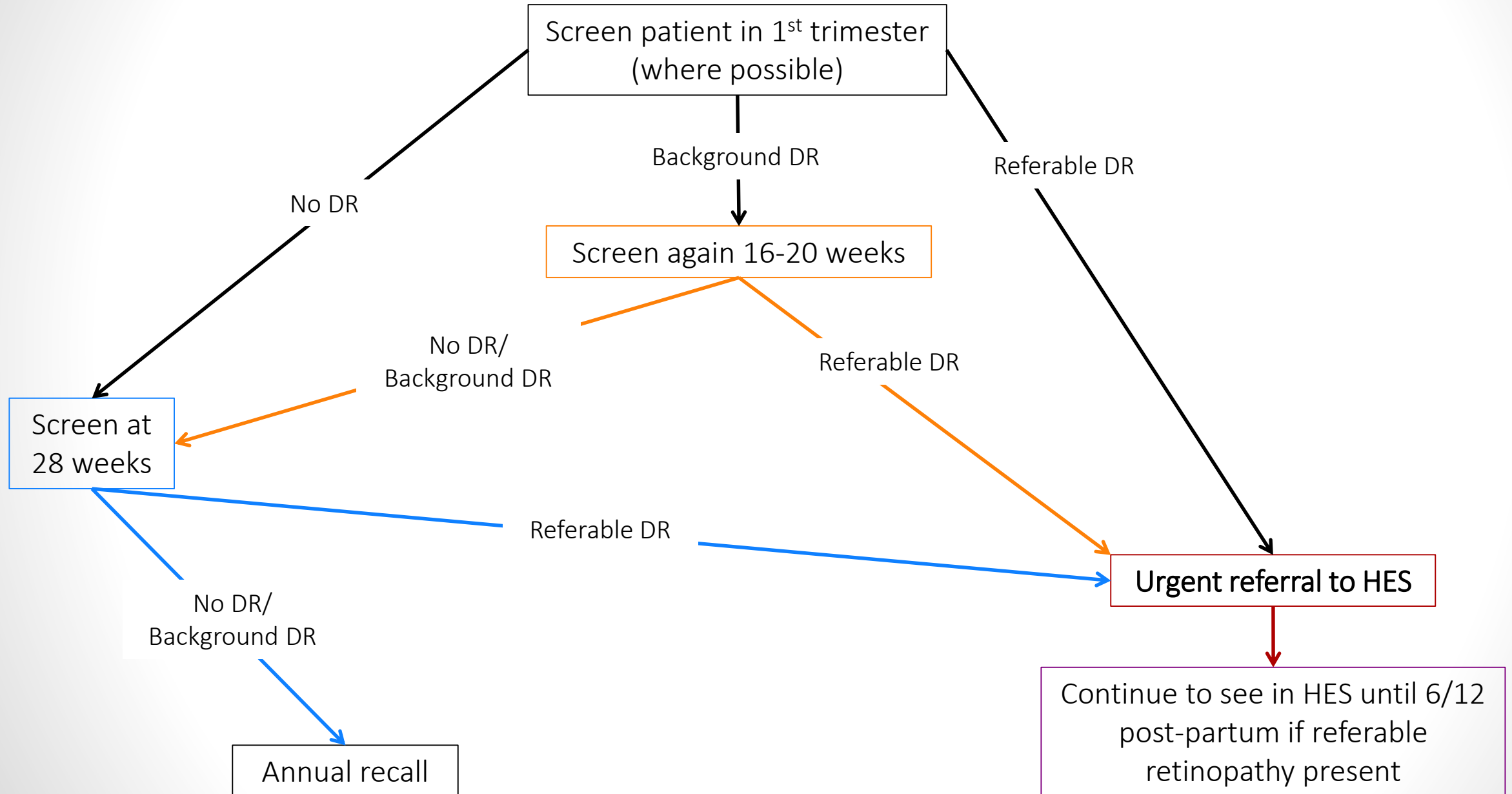
Samantha S Mann

SEL-DESP Guy's and St Thomas' NHS trust

Introduction

- Current NICE guidelines:
 - pregnant women with pre-existing diabetes should be screened for diabetic retinopathy more frequently than annually.
- This audit aims to review our compliance with these standards in the South East London DESP.

NICE guidance

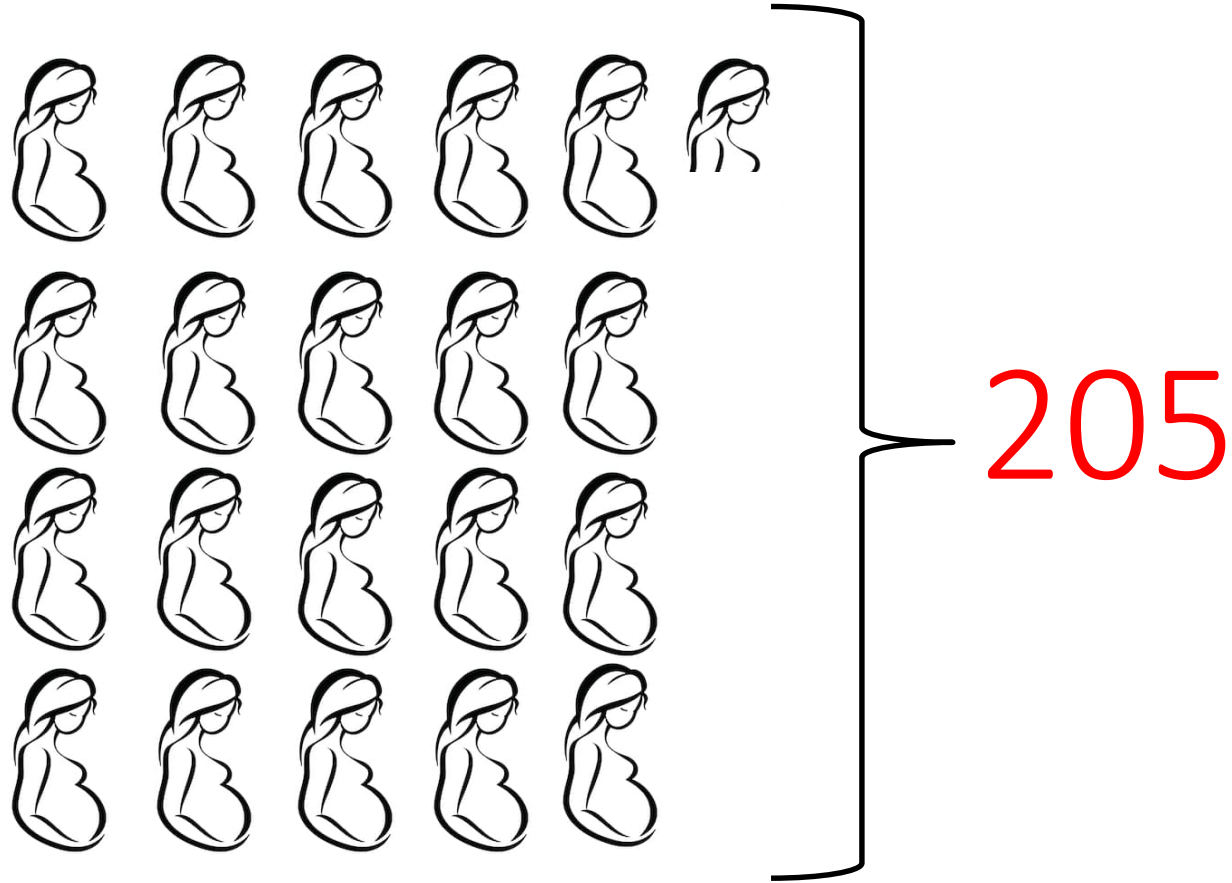


Methods

We looked at Referrals from 2018 to check:

- 1) if patients were referred before the end of their first trimester (defined as <13 weeks)
- 2) ideally referred before 10 weeks of pregnancy
- 3) If delayed (>10 weeks), the reasons for the delay in referral
- 4) the proportion of patients screened before the end of their first trimester (defined as <13 weeks)
- 5) if patients were offered an appointment within 6 weeks of their referral date.

Results – Total Number



Results – Median Age



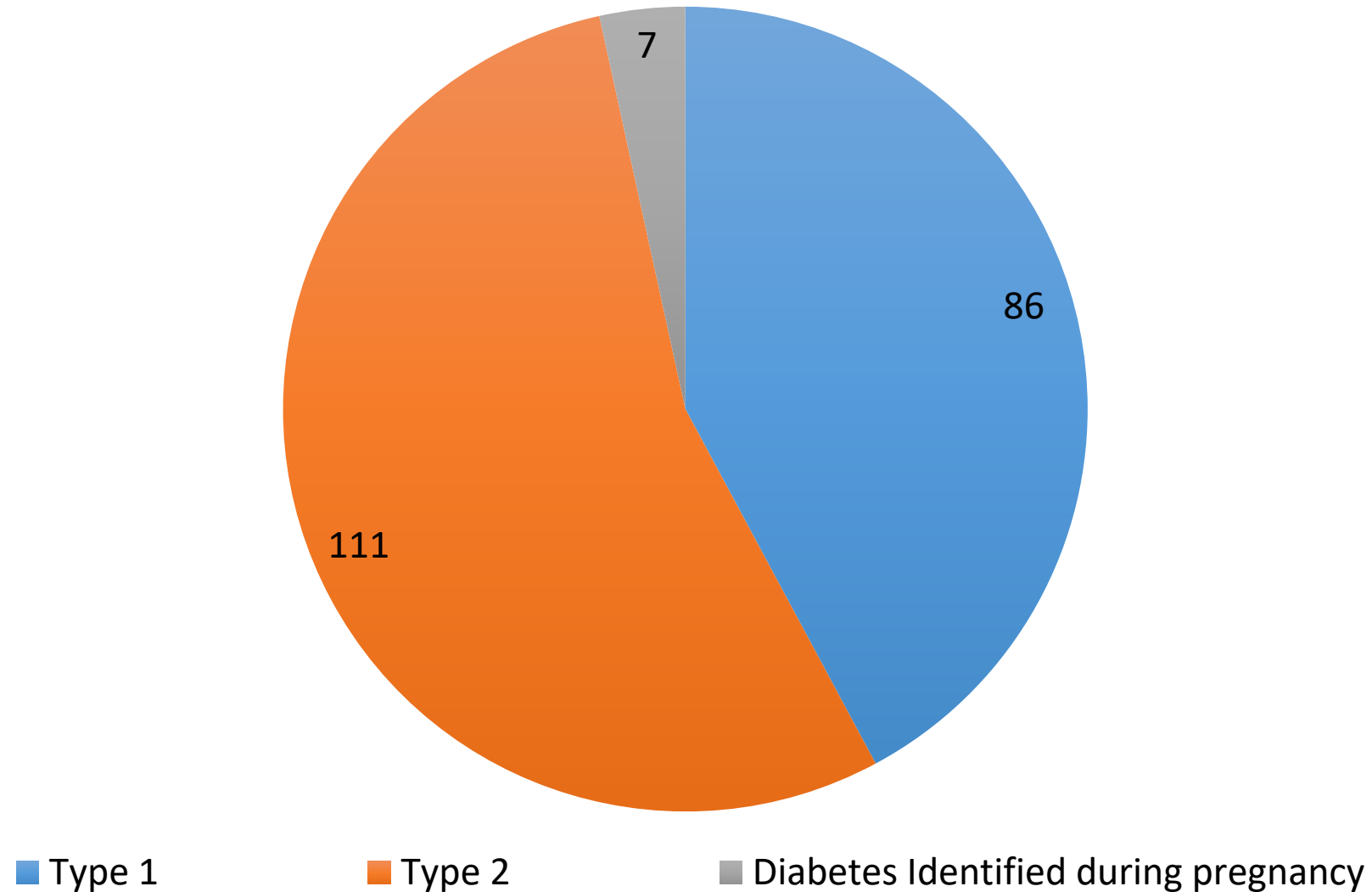
54

34 years

17

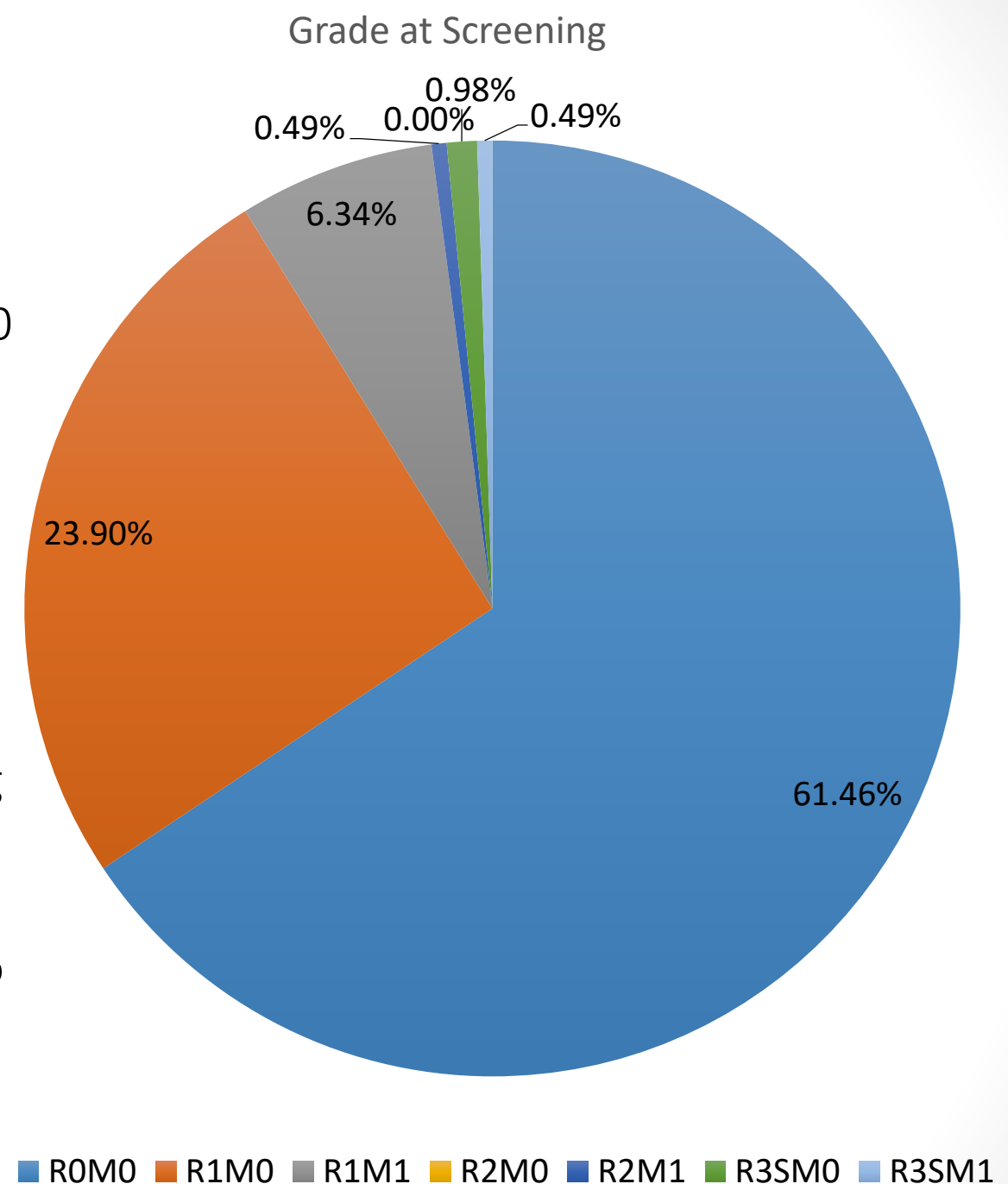


Results – Type of Diabetes



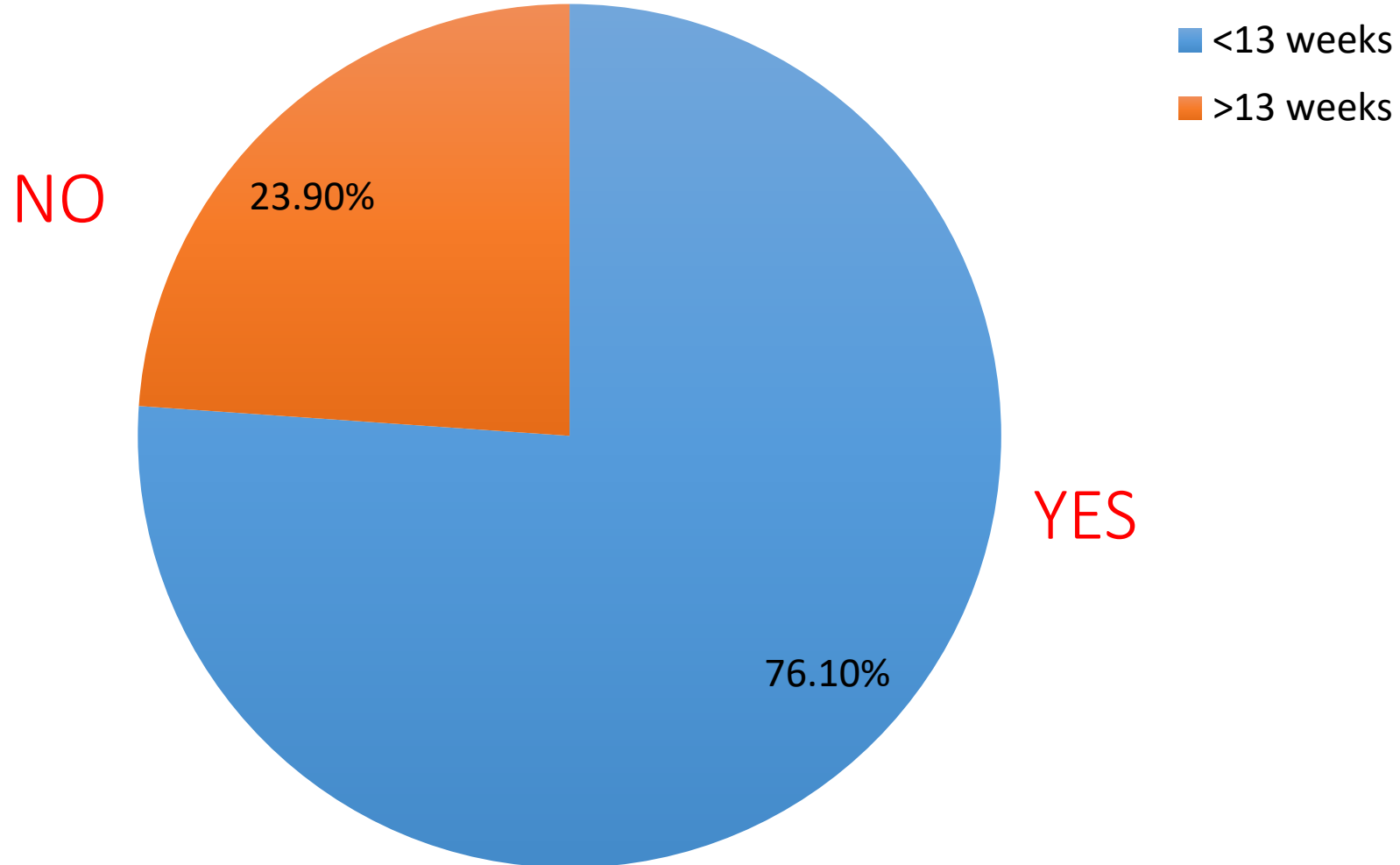
Results – Grade

- Most patients graded at R0M0 or R1M0
- 18 patients referred to HES
- 14 patients with R1M1
- No patients with active R3.
- 3 patients with stable R3 (+/- maculopathy) → all seen by HES during pregnancy
- 1 patient with R2M1 – seen by HES, no intervention required

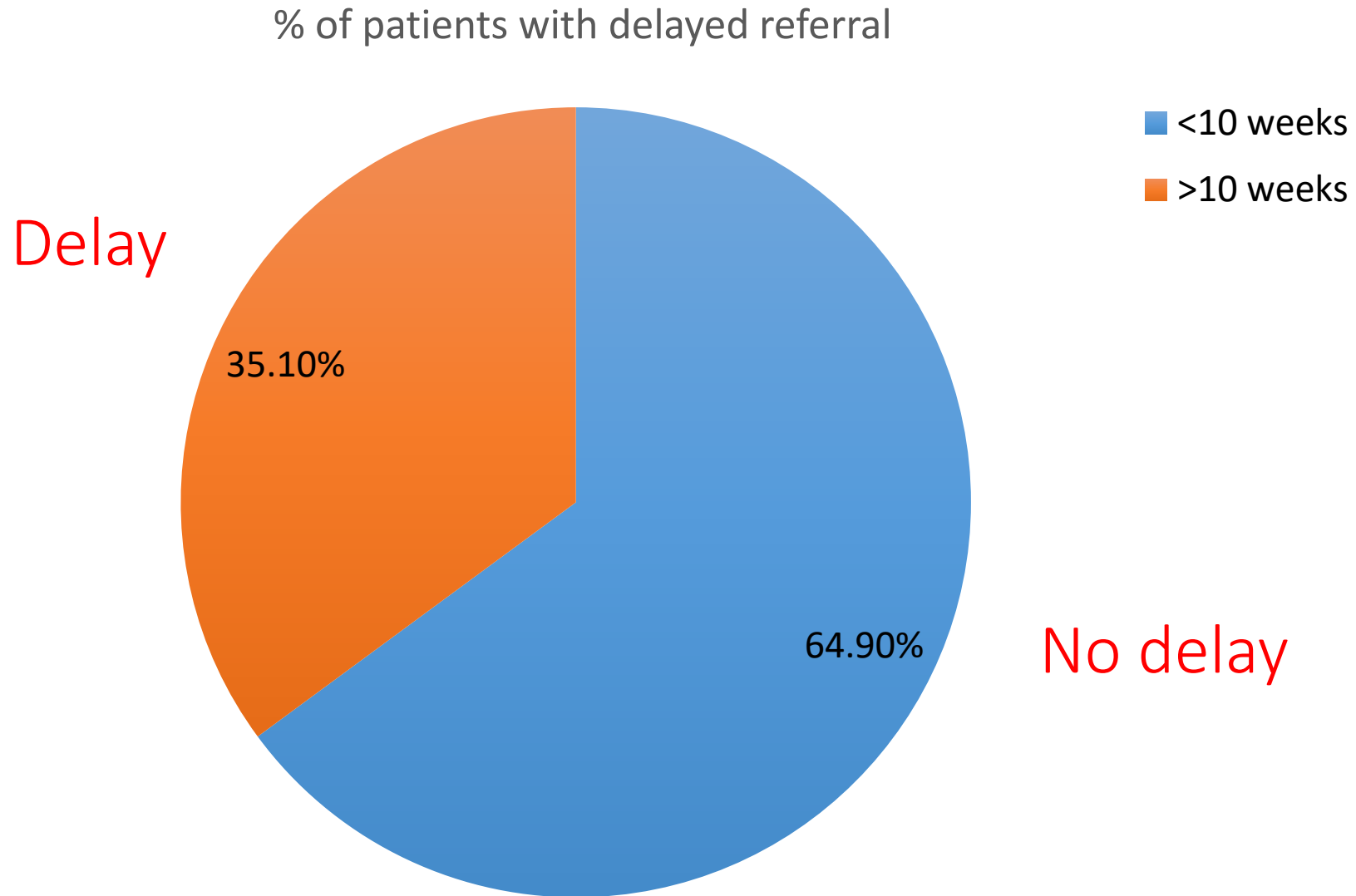


Results

% of patients referred before the first trimester

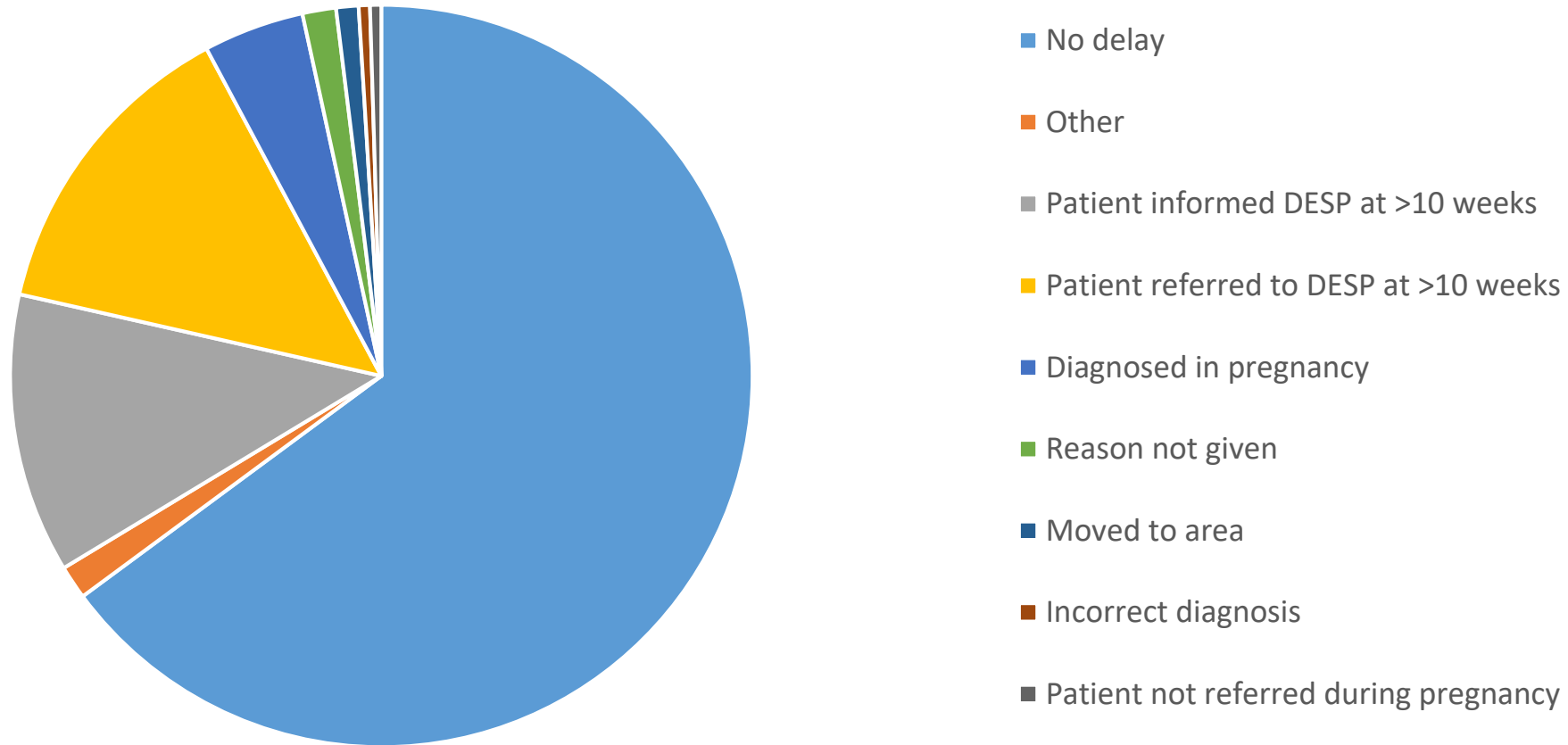


Results



Results

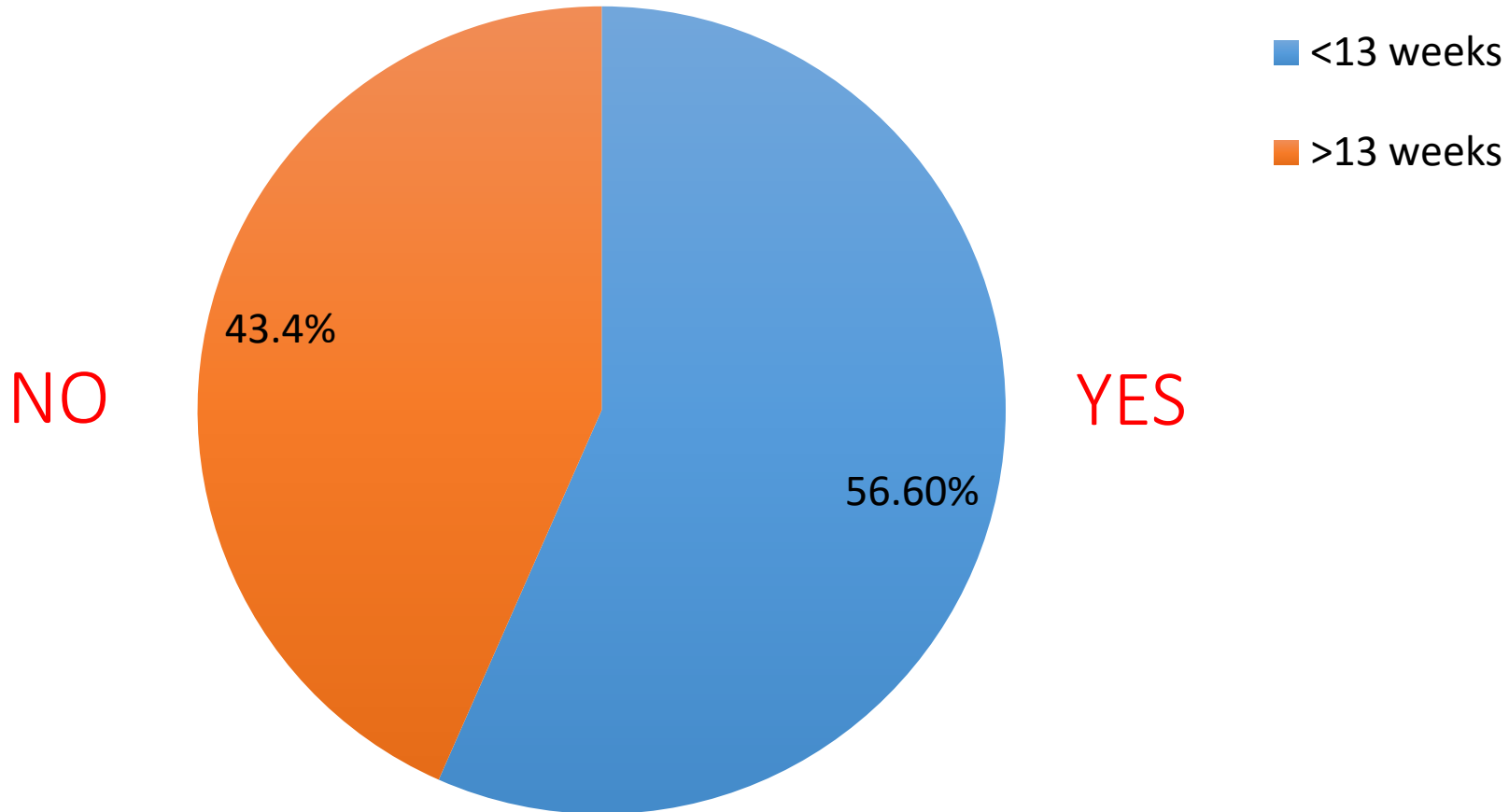
Reasons for delayed referral



- 1) Patient was referred to DESP at >10 weeks (13.7%)
- 2) Patient informed DESP at >10 weeks (12.2%)

Results – Screened in 1st trimester?

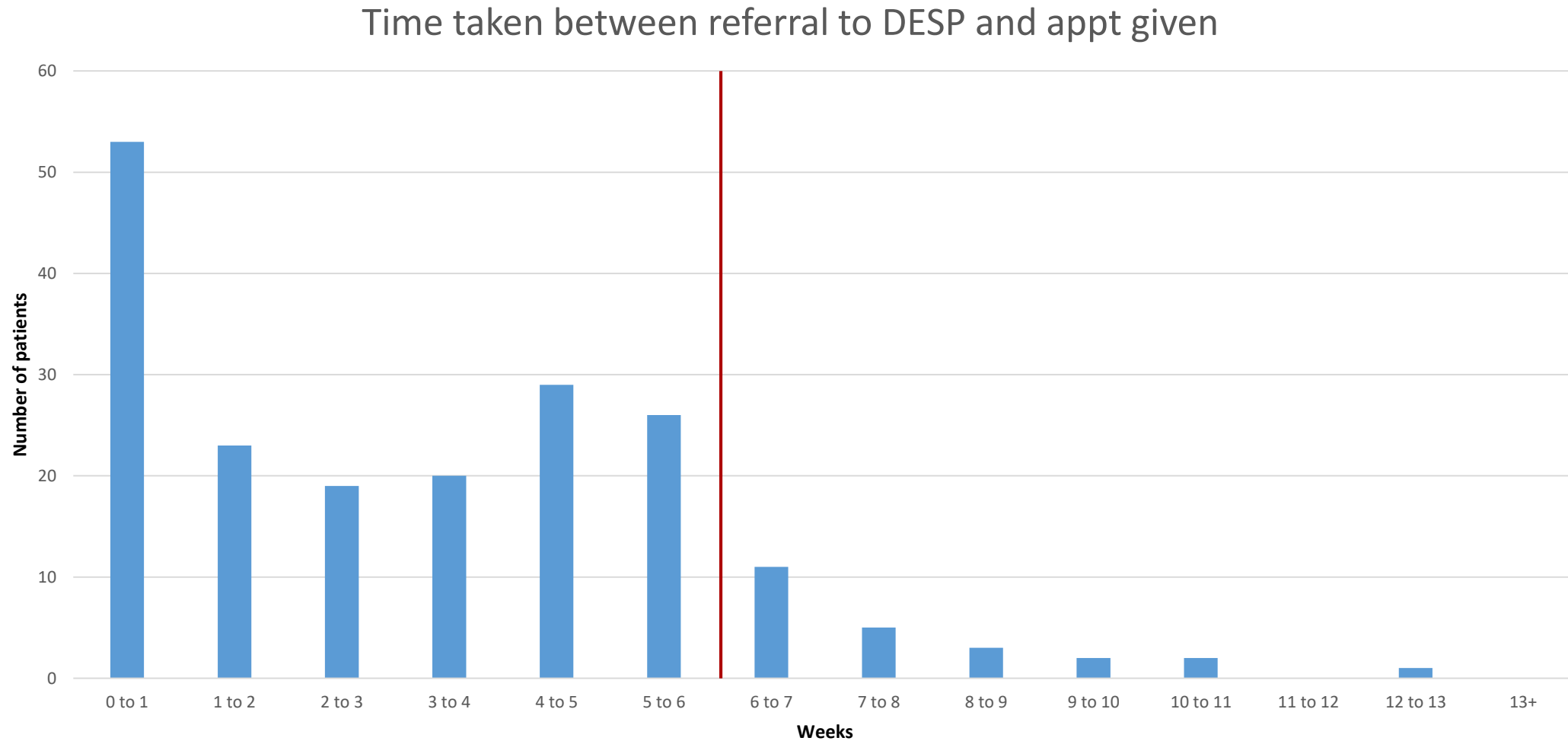
% of patients screened before the 1st trimester



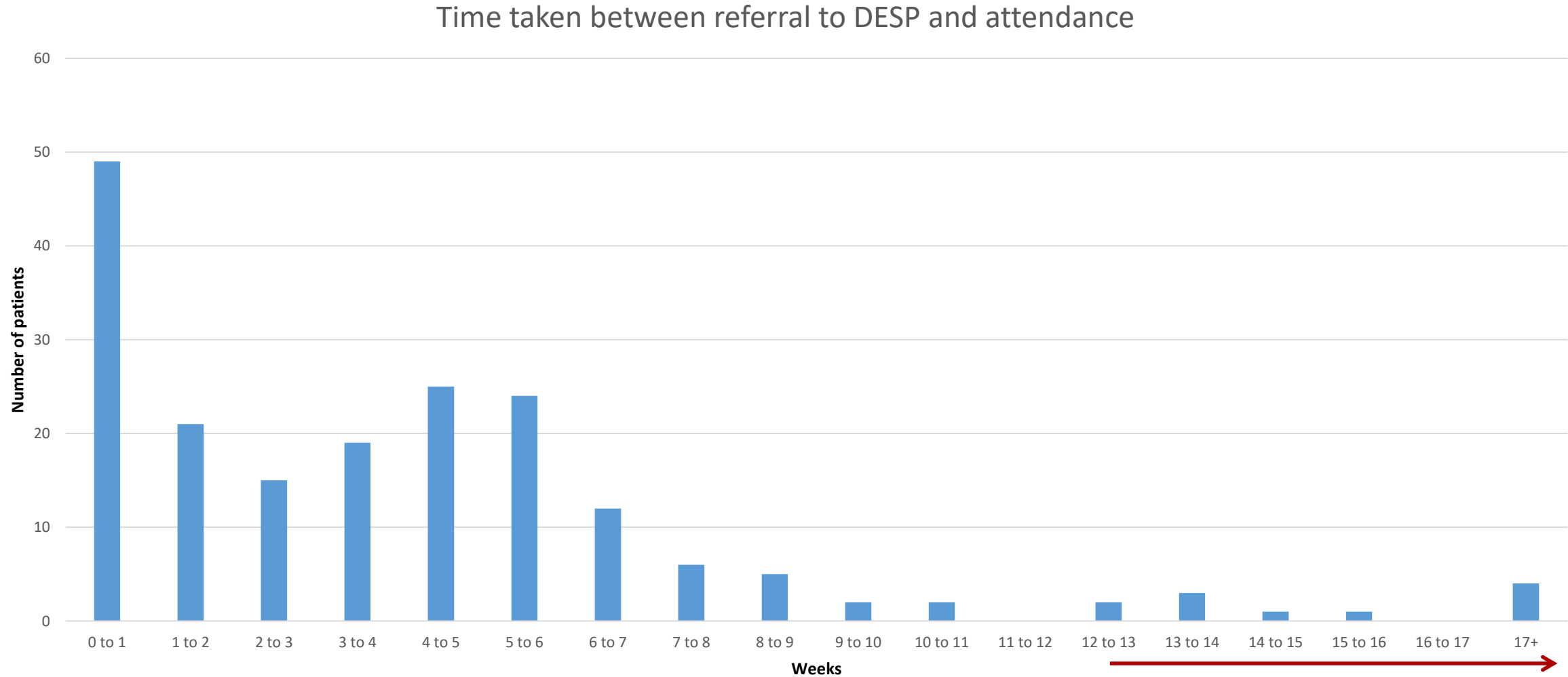
56.6% of patients were screened before the end of their first trimester.

Results

- The vast majority of patients (92.7%) were offered an appointment within 6 weeks of their referral.



Results

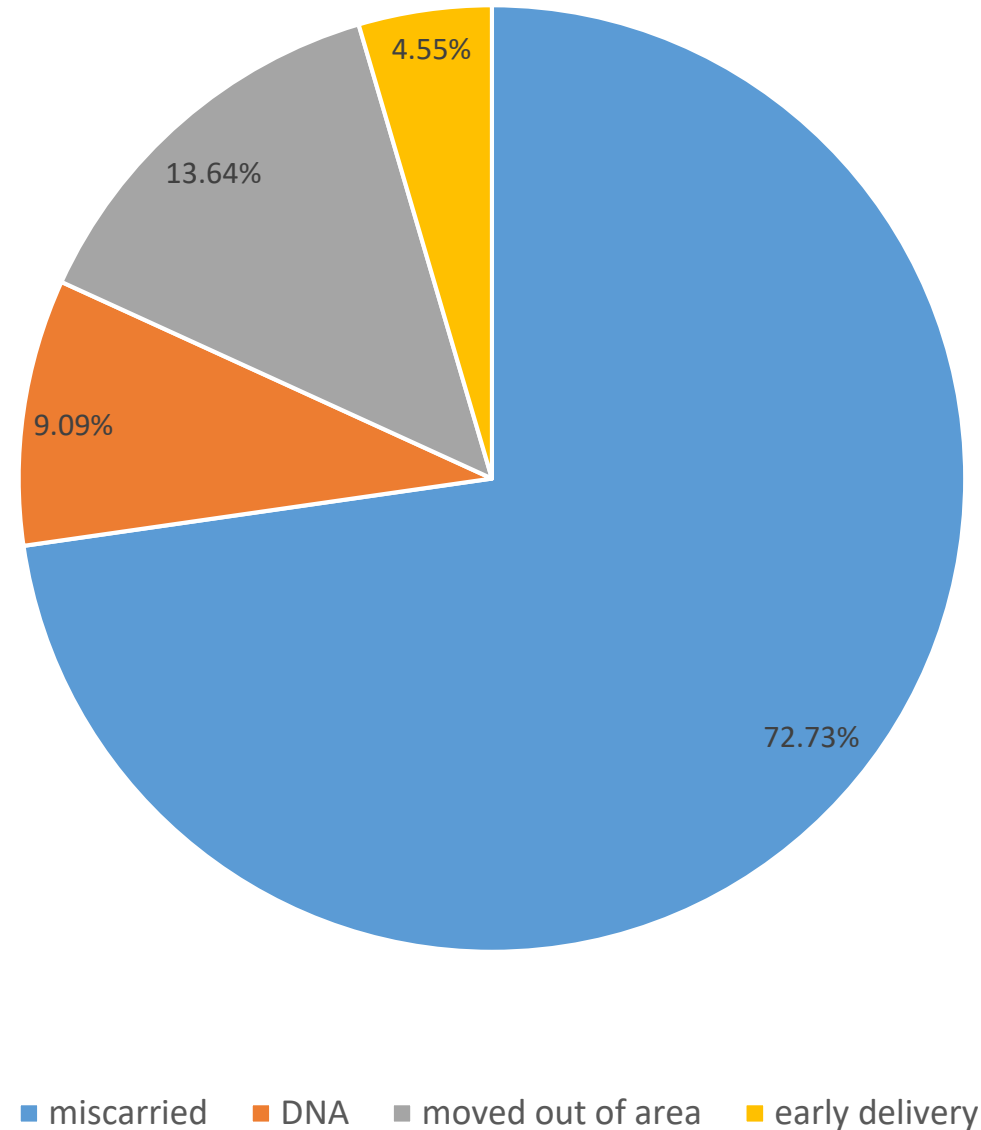


High DNA rate

Results

- 10.7% of patients did not attend follow up appts.
- 1) The most common reason was miscarriages
 - 2) The second most common reason was unknown DNA

Reasons patients did not attend follow up appts



Conclusions

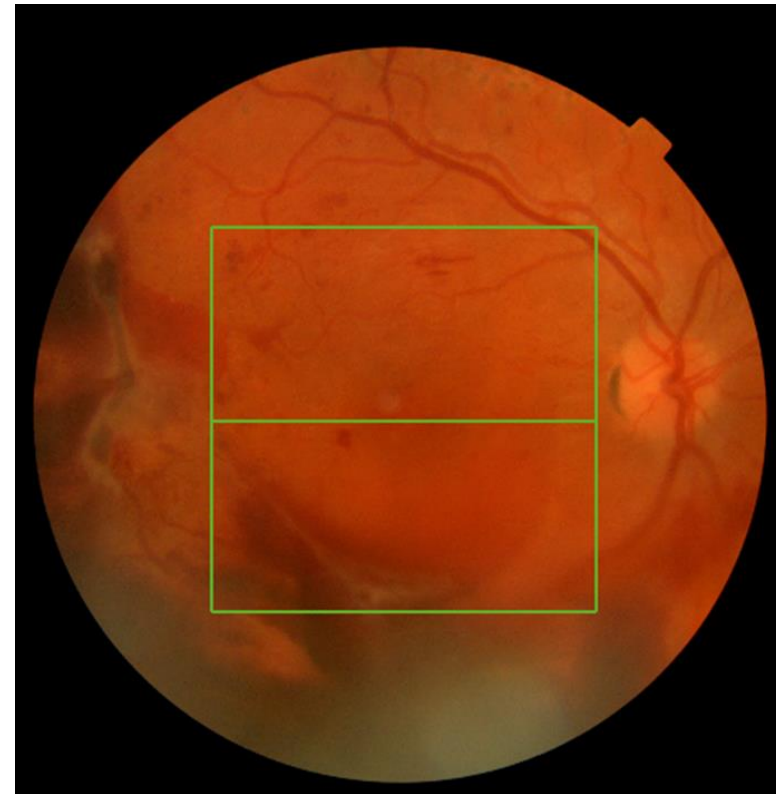
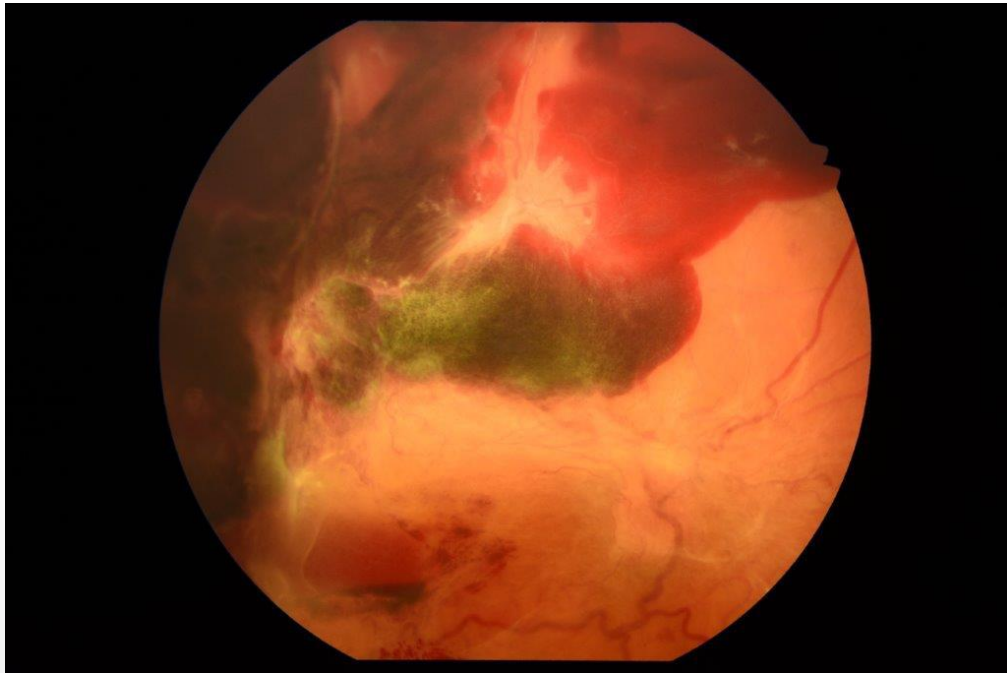
- Appointments offered within the recommended timescales in 92.7% of cases
- However, not meeting NICE standard of being seen within the 1st trimester in 43.4% of cases
- Reasons?
- Patient related - due to late presentation or delay in referral to DESP.

Recommendations – What can you do?

- Better liaison with diabetic and antenatal departments to increase awareness
- Add DESP to the initial diabetic midwife appointment checklist to ensure referral is made at the first booking appointment.
- Possibly have posters up in waiting areas
- Increase patient awareness regarding the importance of informing the screening team about their pregnancy (Implemented - screeners wearing badges)

Please remember

that eye screening can prevent blindness- especially in pregnancy!!



References

- NICE guidelines:
<https://www.nice.org.uk/guidance/qs109/chapter/Quality-statement-4-Referral-for-retinal-assessment> (last accessed 08/09/19)