Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Similarly, recipient demise had higher stages when compared to alive recipients (OR 0.51; 95% CI: 0.26, 1.00, P 0.05) (**Figure 1**).

When incidence of fetal demise was compared between stages II and I, no difference was observed for donor or recipient demise (**Figure 2**). When risk of fetal demise was compared between stages III and I, donor demise was more common in stage III (OR 2.67; 95% CI: 1.44, 4.98, P 0.002), but no difference was found for recipient demise (**Figure 3**). Pregnancies with donor demise had lower GA at the time of FLS (weeks) (mean difference -0.53; 95% CI: -0.96, -0.10, P 0.020), while pregnancies complicated by recipient demise had similar GA at time of FLP comapred to those without demise (**Figure 4**).

CONCLUSION: Earlier GA at FLP is associated with increased risk of single fetal demise in TTTS as compared to later GA. This difference was attributed to increased donor but not recipient death. Additionally, single demise of the donor and recipient was significantly observed after FLP for higher stages (III and IV) compared to lower ones (I and II). When rates of single fetal demise after FLP for stages II and III were individually compared to stage I, mortality was similar in stage II but not in stage III. The finding of stage III in TTTS increased risk of single fetal demise of the donor but not the recipient.

Fig 1. Fetal demise in low- and high-Quintero stage

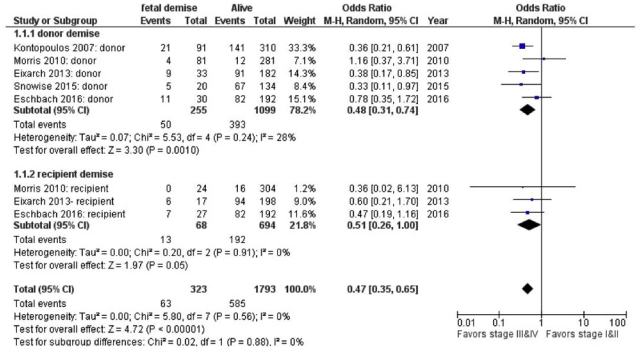


Fig 2. Fetal demise in Quintero stage 1 vs stage 2

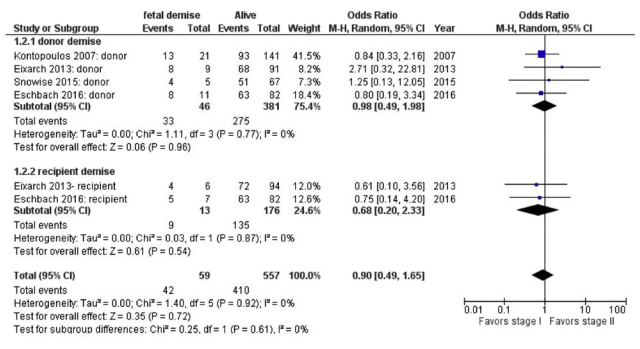


Fig 3. Fetal demise in Quintero stage 1 vs stage 3

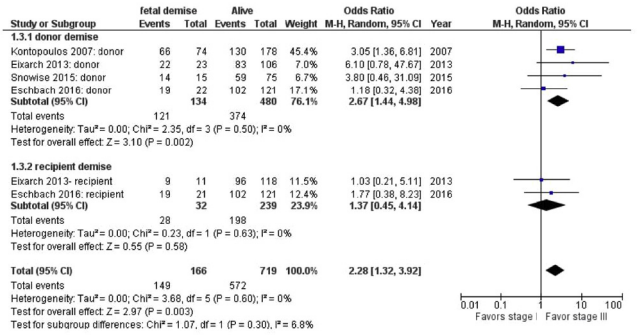
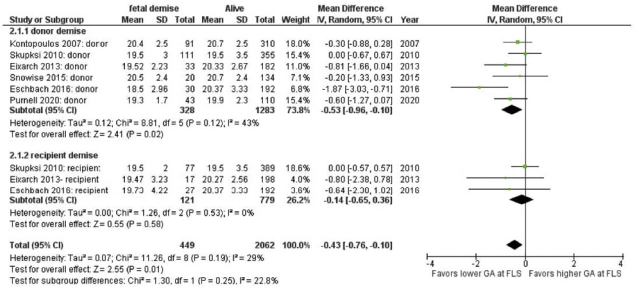


Fig 4. GA at FLS in fetal demise vs alive fetus



252 Intention to receive COVID-19 vaccine during pregnancy: A systematic review and meta-analysis

Ahmed A. Nassr[1], Kamran Hessami[2], Stephanie Morain[1], Yalda Afshar[3], Sara Arian[1], Nazlisadat Mesh[1], Kjersti M. Aagaard[4], Alireza A. Shamshirsaz[5]

[1]Baylor College of Medicine, Houston, TX, [2]Department of Obstetrics & Gynecology, Baylor College of Medicine, Houston, TX, [3]University of California, Los Angeles, Los Angeles, CA, [4]Texas Children's and Baylor College of Medicine, Houston, TX, [5]Baylor College of Medicine/Texas Children's Hospital, Houston, TX

OBJECTIVE: To assess level of intent to receive COVID-19 vaccination and demographical factors influencing vaccine uptake among pregnant individuals.

STUDY DESIGN: Data sources: PubMed, Scopus and archive/pre-print servers were searched up to May, 2021.

Study eligibility criteria: Cross sectional surveys reporting percentage of the pregnant individuals intending to get COVID-19 vaccine were considered eligible.

Study appraisal and synthesis methods: The primary outcome was to estimate prevalence of COVID-19 vaccination intent among pregnant population. The secondary outcome was to evaluate the association of vaccine uptake with the following factors: maternal age, gravidity, marital status, medical disease, history of COVID-19 infection and if received other vaccines during pregnancy. Meta-analysis and meta-regression were used to pool estimates and examine the influencing factors.

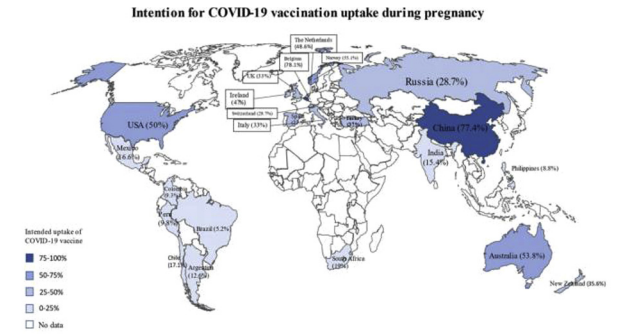
RESULTS: Twelve studies sourcing data of 16,926 individuals who identified as pregnant were eligible. The estimated intention for receipt of COVID-19 vaccine among women who were pregnant was 47% (95% CI:38%-57%), with the lowest prevalence in Africa 19% (95% CI:17%-21%) and the highest in Oceania 48.0% (95% CI:44.0%-51.0%) (fig. 1). Association of vaccine uptake with various demographic and clinical factors is shown (fig. 2) with uptake of

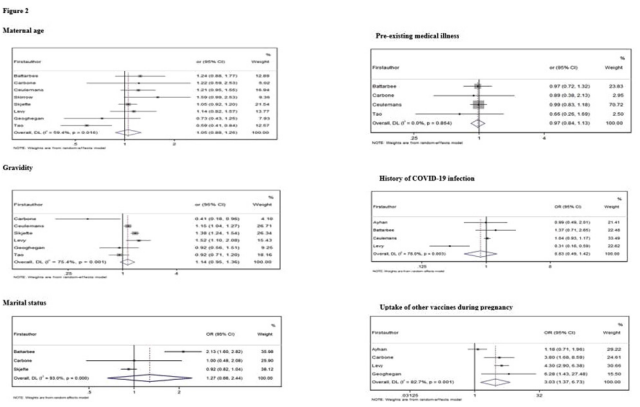
other vaccines during pregnancy associated with higher rate of intent to receive the COVID-19 vaccine (OR=3.03; 95% CI:1.37−6.73; P 0.006).

CONCLUSION: The intent to receive COVID-19 vaccine is relatively low among women who are pregnant and substantially varies based on country of residence. In our meta-analysis, intent of women who were pregnant to receive the COVID-19 vaccine was significantly associated history of receiving of other vaccines during pregnancy. Given that in every country only a minority of gravidae have received the COVID-19 vaccine, despite known risks of maternal morbidity and mortality with no evidence of risks of vaccination, highlights the importance of revised approaches at shared decision making and focused public health messaging by national and international advisories.

Figure 1. Included studies characteristics and global intention for COVID-19 among pregnant population

Study characteristics				
First author (country)	Population	Study period	Vaccination intention rate	NOS
Ayhan (Turkey)	300	1 January to 1 February , 2021	(n=111, 37%)	7
Battarbee (USA)	915	9 August to 10 December, 2020	(n=374, 41%)	8
Ceulemans (multinational)	6661	10 April to 31 May 2020 and 16 June to 14 July 2020	(n=3943, 61.4%)	8
Hoque (South Africa)	346	4 September to 3 October 2020	(n=219, 63.3%)	7
Skirrow (UK)	799	3 August to 11 October 2020	(n=147, 18.4%)	8
Skjefte (multinational)	5282	28 October to 18 November 2020	(n=2747, 52%)	9
Carbone (Italy)	142	January 2021	(n=40, 28.2%)	7
Mappa (Italy)	161	December 2020	(n=79, 49.1%)	7
Levy (USA)	653	14 December 2020 to 14 January 2021	(n=381, 58.3%)	7
Geoghegan (Ireland)	300	29th December 2020	(n=113, 37.7%)	8
Tao (China)	1392	13 to 27 November 2020	(n=1077, 77.4%)	8
Sutton (USA)	216	7 to 29 January 2021	(n= 86, 39.8%)	7
Global perspective				





253 Spontaneous preterm birth and PPROM After Fetoscopic laser Surgery for TTTS- Systematic review and Meta-analysis

Hiba J. Mustafa[1], Katherine Goetzinger[2], Ali Javinani[3], Faezeh Aghajani[1], Christopher Harman[1], Alireza A. Shamshirsaz[4], Magdalena Sanz Cortes[4], Roopali V. Donepudi[5], Eyal Krispin[3], Ahmed A. Nassr[3], Jimmy Espinoza[4], Michael A. Belfort[6], Ozhan M. Turan[2]

[1]University of Maryland, Baltimore, MD, [2]University of Maryland Medical Center, Baltimore, MD, [3]Baylor College of Medicine, Houston, TX, [4]Baylor College of Medicine/Texas Children's Hospital, Houston, TX, [5]Texas Children's Pavilion for Women, Baylor College of Medicine, Houston, TX, [6]Texas Children's Hospital, Houston, TX

OBJECTIVE: To identify the prevalence and risk factors for spontaneous preterm birth (sPTB); in general; and preterm prelabor rupture of membranes (PPROM); in specific; following fetoscopic laser surgery (FLS) for twin-to-twin transfusion syndrome (TTTS)

STUDY DESIGN: We searched PubMed, Scopus, and EMBASE systematically from inception until June, 2020. Multiple pre-operative, intra-operative, and post-operative factors were tabulated. The random-effect model was used to pool the odds ratios (OR) and the corresponding 95% confidence intervals (CIs). Heterogeneity was assessed using the I^2value.

RESULTS: 24 studies including our cohort reporting 9060 TTTS pregnancies were included. The incidence of sPTB was 36% and incidence of PPROM was 27.4%. Significant factors for sPTB were pre-operative cervical length (CL) < 25 mm (OR: 1.52, 95% CI 1.2-1.92, $I^2$0.0%), presence of anterior placenta (OR: 1.15, 95% CI 1.05-1.26, $I^2$0.0%), performance of "Solomon" technique (OR: 1.27, 95% CI 1.13-1.43, $I^2$0.0%), septostomy (OR: 1.94, 95% CI 1.32-2.84, $I^2$78.7%), and chorioamnion separation (CAS) (OR: 1.7, 95% CI 1.28-2.26, $I^2$69.1%). Pre-operative cerclage placement, Gestational age (GA) at fetal intervention < 17 weeks, Intra-operative amnioinfusion and amnioreduction were not significantly associated with sPTB. Significant factors for PPROM were pre-operative CL < 25 mm (OR: 1.52, 95% CI 1.2-1.92, $I^2$0.0%), presence of anterior placenta (OR: 1.15, 95% CI 1.01-1.31, $I^2$0.0%), performance of "Solomon" technique (OR: 1.3, 95% CI 1.11-1.53, $I^2$0.0%), septostomy (OR: 2.07, 95% CI 1.42-3.03, $I^2$68%), and CAS (OR: 2.1, 95% 1.72-2.56, $I^2$29.1%)

CONCLUSION: TTTS pregnancies with CL < 25 mm and anterior placentation have increased risk for both sPTB and PPrOM. Intra-operative factors including "Solomon" technique, septostomy, and chorioamnion separation increase the risk for sPTB and PPROM. Early GA at fetal intervention does not seem to increase that risk. This is the first meta-analysis study conducted to investigate risk factors of sPTB and PPROM following laser ablation for TTTS.