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# **EVALUATION OF CESAREAN SECTION AT NATIONAL HOSPITAL OF OBSTETRICS & GYNECOLOGY 2017**





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## BACKGROUND

- ❖ Rate of C.section increases rapidly, especially with the development of assisted reproductive technology
- ❖ 1970s: Rate of C.section 5-7% (worldwide). Now: 25-30% (worldwide); 36.9% (Vietnam)
- ❖ Expanding indications of C.section resulted in disadvantages



# OBJECTIVES



**Calculate the C.section rate at NHOG in 2017**



**Analyze factors relating to C.section indications**





## PATIENTS STUDIED

All pregnant women undergoind C.section at NHOG in  
2017



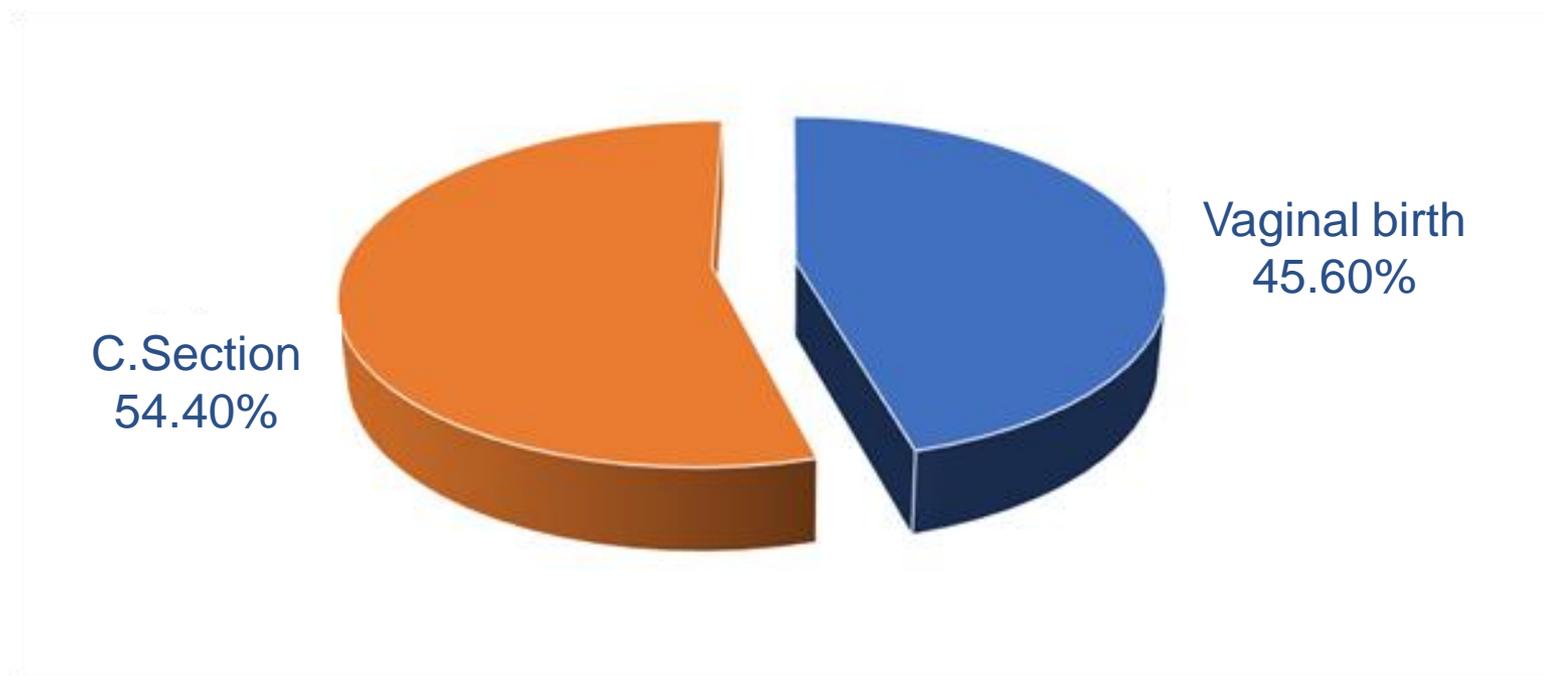


# METHODS

- Retrospective descriptive study with data from medical records at NHOG
  - Data analyzed by SPSS 16.0
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## RESULTS - DISCUSSION



**Figure 1. C.section rate at NHOG 2017**

Total delivery in 2017: 21,722, total C.section: 11,166 (54.40%)



## RESULTS - DISCUSSION

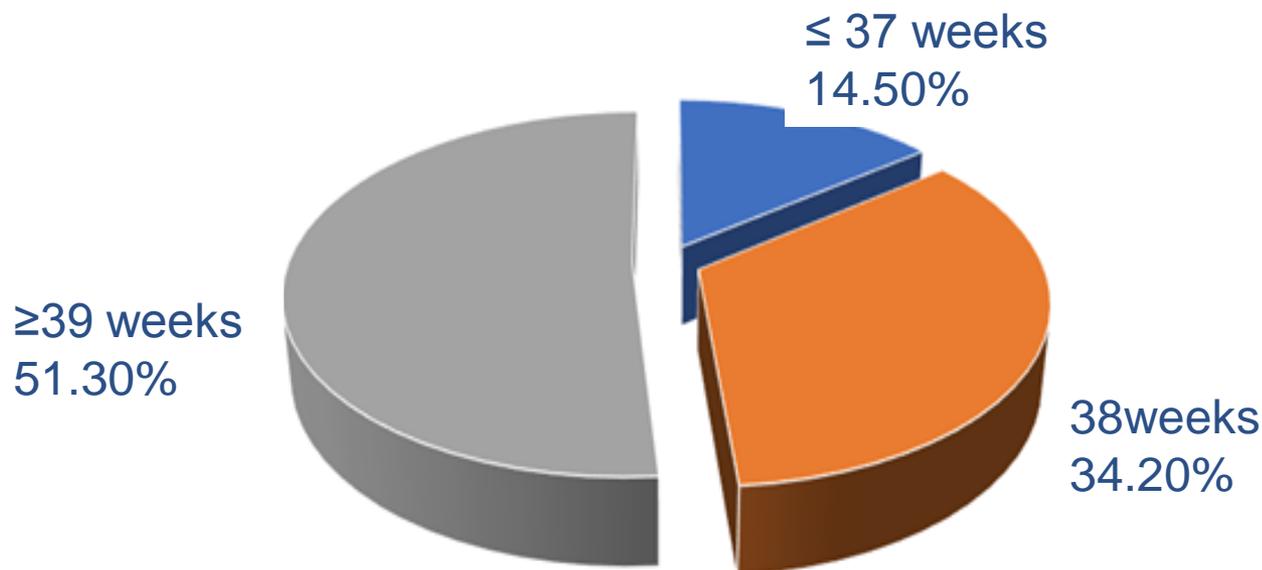
**Table 1. Elective and emergency C.section by history of previous C.section**

Characteristics	Emergency		Elective		Tổng
	N	%	N	%	
Repeat C.section	1983	35,44	3613	64,56	5596
Primary C.section	2991	53,69	2579	46,31	5570
Total	4974	44,55	6192	55,45	11166

$\chi^2 = 686,46, p < 0,001$



## RESULTS - DISCUSSION



***Figure 2. Distribution of C.section by gestational age***

C.Section at  $\geq 39$  weeks GA account for more than 50%, followed by 38 weeks GA with more than 1/3,  $\leq 37$  weeks GA is only 14,5%.



## RESULTS - DISCUSSION

**Table 2. Number of C.section by type of fertilization and gestational age**

Gestational age	Natural		Assisted		Total
	N	%	N	%	
≤ 37 wk	1123	69,36	496	30,64	1619
38 wk	2963	77,59	856	22,41	3819
≥ 39 wk	5391	94,12	337	5,88	5728
<b>Total</b>	<b>9477</b>	<b>84,87</b>	<b>1689</b>	<b>15,13</b>	<b>11166</b>

$\chi^2 = 842,53, p < 0,001$

Natural pregnancy: C section at GA ≤ 37 wk. was 69,36% and at GA ≥ 39 wk. was 84,87%.  
Assisted pregnancy: Highest at GA ≤ 37 wk. (30,64%) and lowest at GA ≥ 39 wk (15,88%)



## RESULTS - DISCUSSION

**Table 3. C section in previous cesarean scar**

Gestational age	Emergency		Elective		Total
	N	%	N	%	
≤ 37 wk	203	39,96	305	60,04	508
38 wk	610	49,88	613	50,12	1223
≥ 39 wk	704	24,84	2130	75,16	2834
Total	1517	35,44	3048	64,56	4565

$\chi^2 = 253,01, p < 0,001$

C.Section during labor was highest at 38 wk. of GA (39.88%) and lowest at ≥ 39 wk. of GA (24,84%). Elective C.section was highest at GA ≥ 39 wk. (75,16%) and lowest at GA 38wk (50.12%)



## RESULTS - DISCUSSION

**Table 4. Primary C.section by gestational age**

Gestational age	Emergency		Elective		Total
	N	%	N	%	
≤ 37 wk	317	65,09	170	34,91	487
38 wk	770	52,17	706	47,83	1476
≥ 39 wk	1201	48,04	1299	51,96	2500
<b>Total</b>	<b>2288</b>	<b>53,69</b>	<b>2175</b>	<b>46,31</b>	<b>4463</b>

$\chi^2 = 48.16, p < 0,001$

Emergency C.section: highest at GA ≤ 37 wk (65,09%) and lowest at GA ≥ 39 wk (48,04%)  
Elective C.section: highest at GA ≥ 39 wk (51,96%) and lowest at GA ≤ 37 wk (34,91%)



## RESULTS - DISCUSSION

**Table 5. C.section in pregnancy with ART by gestational age**

Gestational age	Emergency		Elective		Total
	N	%	N	%	
≤ 37 wk	140	45,31	169	54,69	309
38 wk	385	81,22	89	18,78	474
≥ 39 wk	234	92,13	20	7,87	254
Total	759	73,19	278	26,81	1037

$\chi^2 = 184,44, p < 0,001$

Emergency: highest at GA ≥ 39 wk (92,13%) and lowest at GA ≤ 37 wk (45,31%).  
Elective: highest at GA ≤ 37 wk (54,69%) and lowest at GA ≥ 39 wk (7,87%).



## RESULTS - DISCUSSION

**Table 6. C section rate in twin pregnancy by gestational age**

Gestational age	Emergency		Elective		Total
	N	%	N	%	
≤ 37 wk.	117	37,14	198	62,86	315
38 wk.	272	42,11	374	57,89	646
≥ 39 wk.	21	15,00	119	85,00	140
<b>Tổng</b>	<b>410</b>	<b>37,24</b>	<b>691</b>	<b>62,76</b>	<b>1101</b>

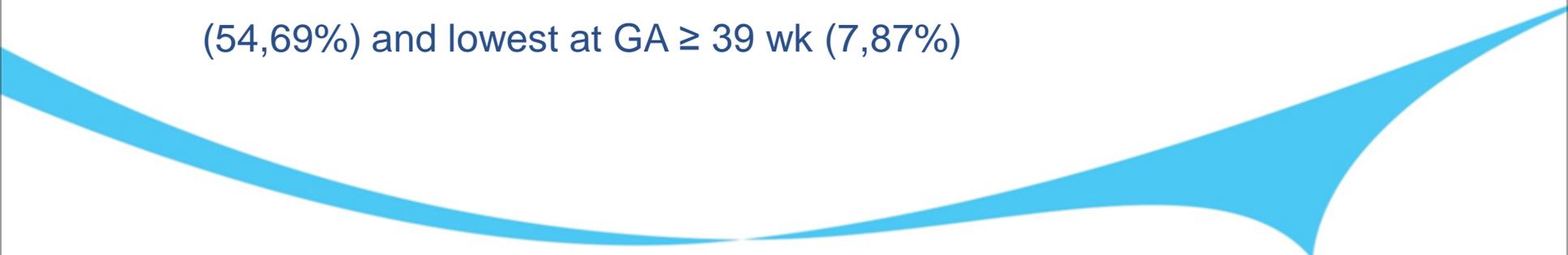
$\chi^2 = 36.17, p < 0,001$

Emergency: highest at GA 38 wk (42,11%) and lowest at GA ≥ 39 wk (37,24%).

Elective: highest at GA ≥ 39 wk (85%) and lowest at GA 38 wk (57,89%).



## CONCLUSIONS

- Retrospective study on 21722 pregnancies, C.section rate: 54,4%.
  - Elective C.section rate: 55.45%
  - Gestational age: 51,3% at  $\geq 39$  wk; 34,2% at 38 wk and 14,5% at  $\leq 37$  wk.
  - Repeat C.section: Elective C.section 64.56%, Primary C.section: Elective C.section 46,31%, Pregnancy with ART: Elective C.section 26,81%, Twin pregnancy: Elective C.section 62,76%
  - Pregnancy with ART: Elective C.section highest at GA  $\leq 37$  wk (54,69%) and lowest at GA  $\geq 39$  wk (7,87%)
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**Thank You !**

