

# The Influence factors on Hospital day after Laparoscopic Cholecystectomy

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## **Selection criteria for laparoscopic cholecystectomy in an ambulatory care setting**

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- ✓ **Age >65 y**
- ✓ **Previous abdominal surgery**
- ✓ **Acute cholecystitis**
- ✓ **Choledocholithiasis signs**



Factors predicting the failure of outpatient surgery

Factor	Group	Percent failed
Age	<u>&gt;50 years</u>	56% (33/59)
	$\leq 50$ years	26% (85/328)*
ASA class	<u><math>\geq 3</math></u>	69% (24/35)
	<3	27% (94/352)*
Surgery start time	<u>After 1:00 PM</u>	51% (34/67)
	Before 1:00 PM	26% (84/320)*

\*  $P < 0.05$ .

ASA = American Society of Anesthesiology class.



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### Laparoscopic cholecystectomy as day-surgery procedure: Current indications and patients' selection

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- ✓ **Previous Upper abdominal surgery**
- ✓ **CBD stone or Acute cholecystitis**
- ✓ **ASA score :  $\geq$  III**

# Aim



To identify **the factors** that influenced Hospital day after the LC



# Materials & Methods



- From August 1st to 31st in 2012
- 336 patient, Surgery for **benign Gall bladder** pathology at **nine different hospital**

Severance Hospital, Kangnam Severance Hospital & Wonju Christian Severance Hospital, Yonsei University College of Medicine, Inchon & Daejeon St. Mary Hospital, Catholic University College of Medicine, National Health Insurance corporation Ilsan Hospital, Bundang Hospital Seoul National University College of Medicine, Guro Hospital Korea University College of Medicine

- Clinical parameters and surgical outcomes were retrospectively analyzed



# Patients characteristics (N=336)

<b>Gender</b>	<b>Male</b>	140 (41.7%)	<b>Female</b>	196 (58.3%)
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	<b>Median(min~ Max)</b>
Age (year)	52(14~85)
Hospital day	2(0~18)
Weight (Kg)	63(37~70.9)
Height (cm)	162(140~189)
BMI (Kg/M <sup>2</sup> )	23.95(16.9~40.9)
Operation time (min)	51.5(14.0~371.0)

# Influence factors on Hospital day - patient factor



		POD ≤ 2day (n=225)	POD > 2day (n=111)	P - value	
				Univariate	Multivariate
Age (year)		50.6±15.0	57.3±15.0	0.000	
Gender	Male	85 (37.8%)	55 (50.0%)	0.033	0.000 [OR = 864.247]
	Female	140 (62.2%)	55 (50.0%)		
Weight(kg)		67.2±45.0	63.5±11.3	0.399	NS
Height(cm)		162.5±9.0	161.7±8.4	0.471	NS
BMI (kg/m <sup>2</sup> )		25.3±15.2	24.2±3.2	0.453	NS
DM	Yes	22 (10.0%)	22 (20.2%)	0.011	0.000 [OR = 1120.393]
	No	198 (90.0%)	87 (78.8%)		
Albumin	< 3.0 g/dL	4 (1.8%)	8 (7.3%)	0.024	NS
	≥ 3.0 g/dL	218 (98.2%)	102 (92.7%)		
Smoking	Yes	25 (11.2%)	25 (22.5%)	0.006	NS
	No	199 (88.9%)	86 (77.5%)		
ASA score	1	122 (56.2%)	40 (40.8%)	0.021	NS
	2	79 (36.4%)	50 (51.0%)		
	3	16 (7.4%)	7 (7.1%)		
	4	0 (0.0%)	1 (1.0%)		

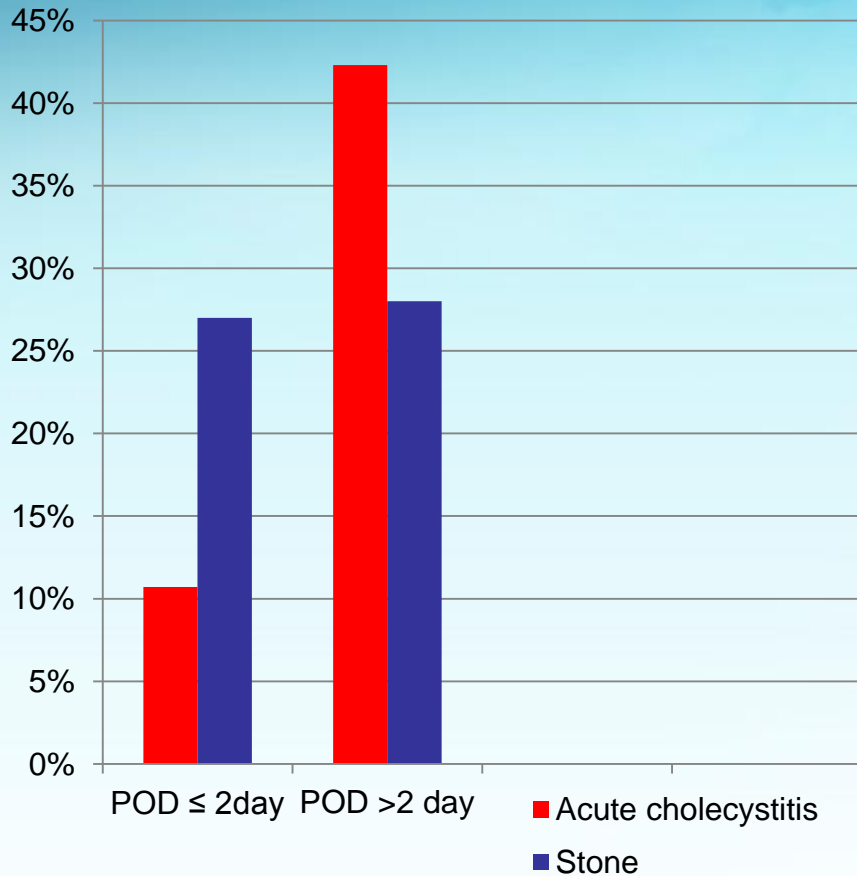
NS, not significant; OR, odds ratio





# Influence factors on Hospital day

## - patient factor



- Acute cholecystitis (p=0.000)
  - ✓ POD ≤ 2day : 10.7%
  - ✓ POD > 2day : 42.3%
- GB Stone (p=0.875)
  - ✓ POD ≤ 2day : 27%
  - ✓ POD > 2day : 28%

# Influence factors on Hospital day

## - perioperative factor



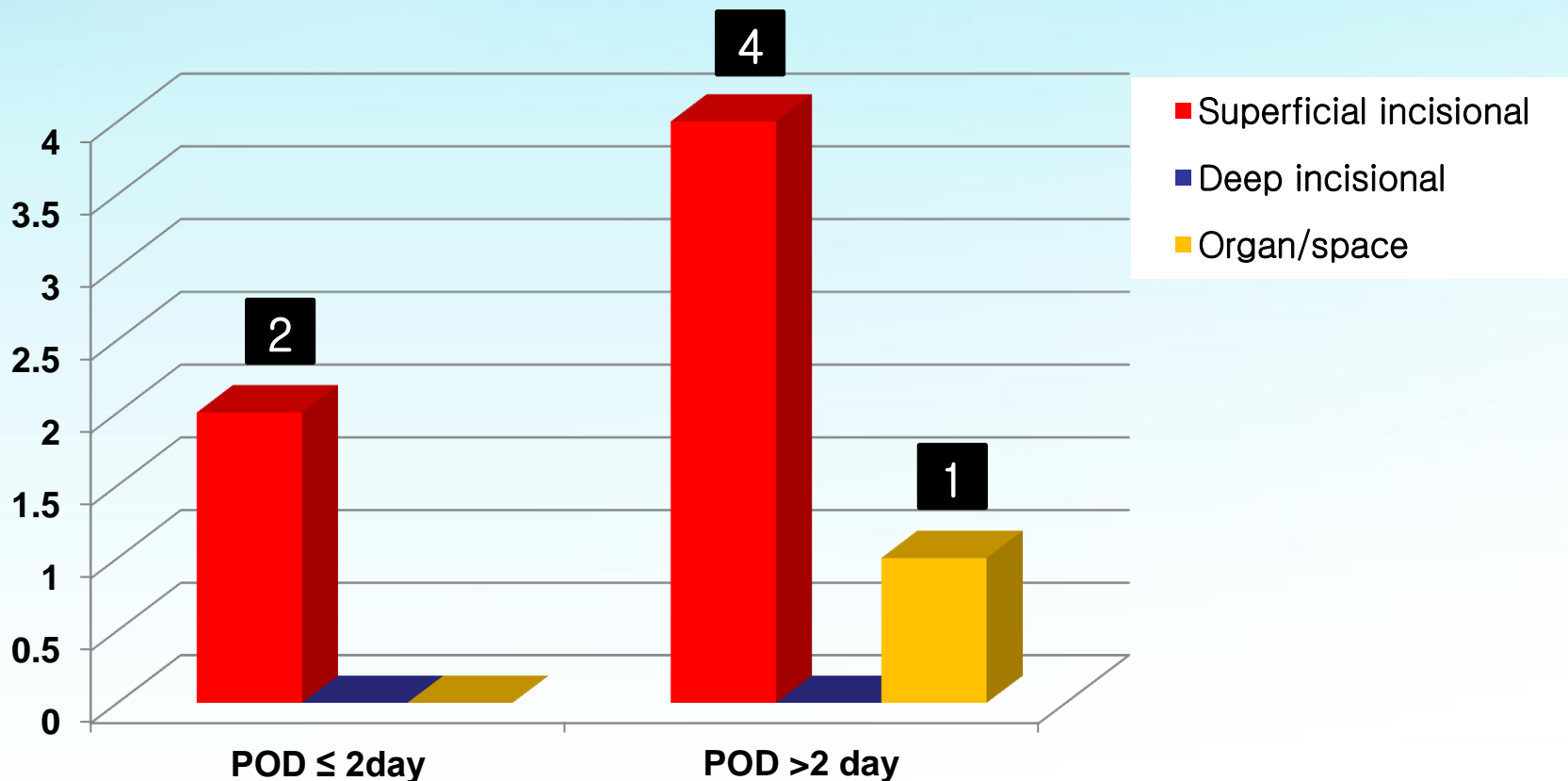
		POD ≤ 2day (n=225)	POD > 2day (n=111)	P - value	
				Univariate	Multivariate
Operation time (min)		49.7±24.7	91.3±63.0	0.000	
Pre/Post transfusion	Yes	1 (0.5%)	6 (5.6%)	0.006	0.020 [OR = 0.071]
	No	216 (99.5%)	102 (94.4%)		
Emergency Operation	Yes	9 (4.0%)	23 (20.7%)	0.000	NS
	No	215 (96.0%)	88 (79.3%)		
Previous abdominal Operation	Yes	36 (16.0%)	20 (18.0%)	0.666	NS
	No	187 (84.0%)	56 (82.0%)		

NS, not significant; OR, odds ratio

# Surgical site infection



		POD $\leq$ 2day (n=225)	POD $>$ 2 day (n=111)	P - value	
				Univariate	Multivariate
SSI	Yes	2 (0.9%)	5 (4.6%)	0.041	NS
	No	218 (99.1%)	103 (95.4%)		



# Conclusion



- Hospital day can be shortening !
- Adequate **sugar control** and replacement of **albumin**
- Emergency surgery, the **careful consideration** is essential
- **Nutritional therapy** is needed for further investigation.



**Thank You for your attention !**