

The chronological review of 450 minimum invasive liver resection in North American single institute



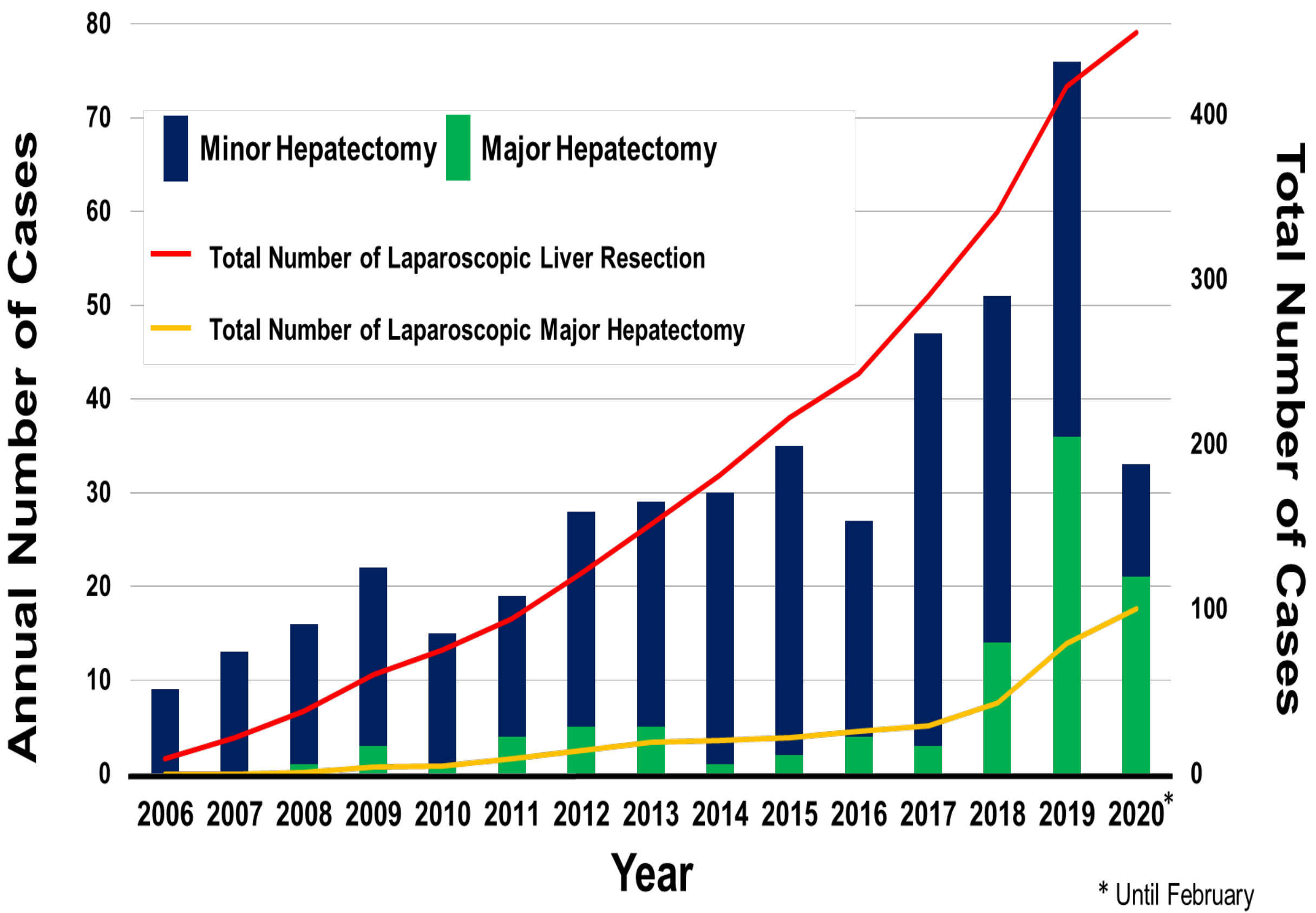
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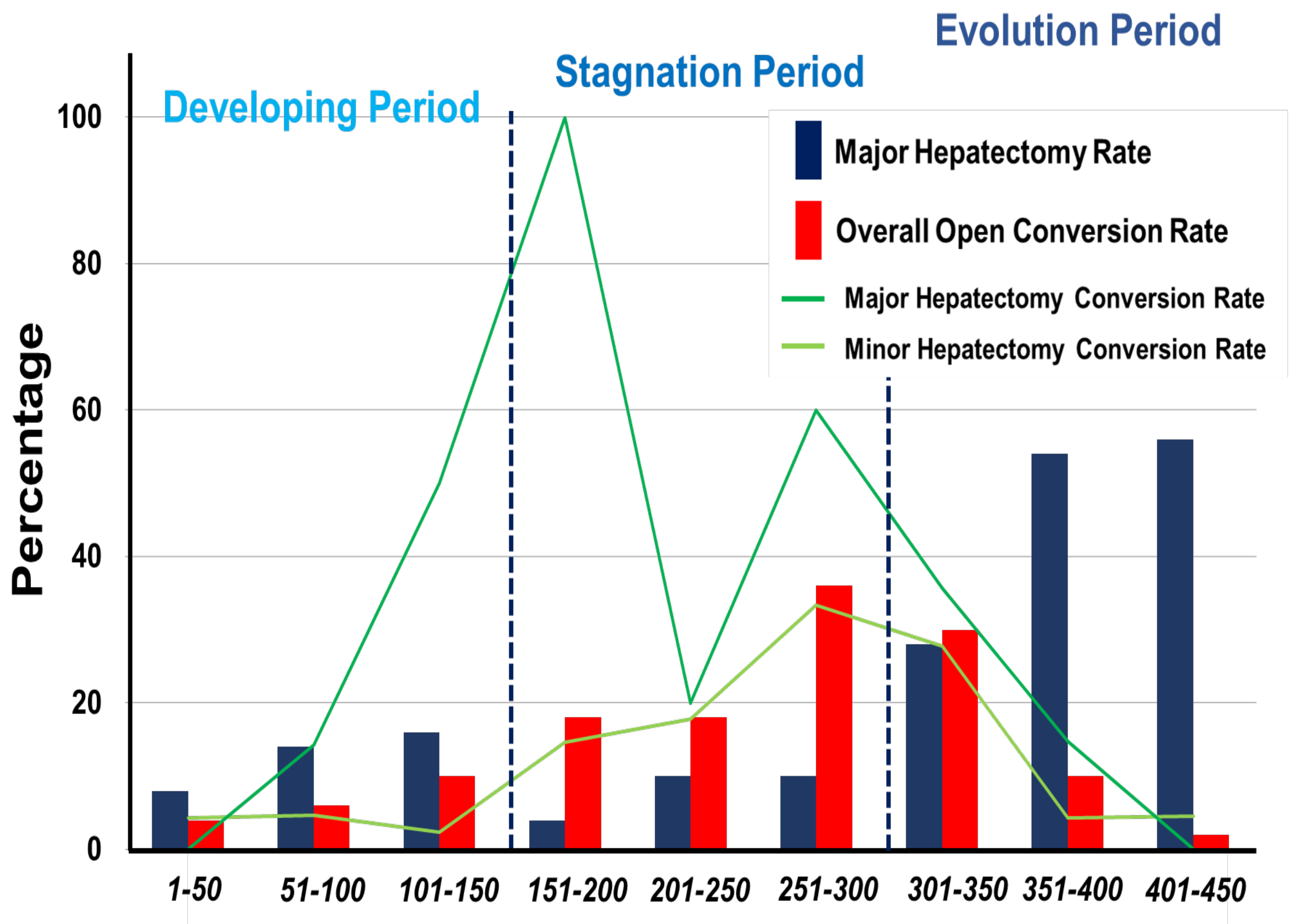
Background

- Techniques for laparoscopic liver resection (LLR) has been developed over the past two decades.
- Most of the extensive MILR experience has been reported from Far East Asian and European institutions, and its adoption in North America has been limited
- The aim of this study is to introduce our institute's chronological data and recent changes to overcome the stagnation of our program

Results

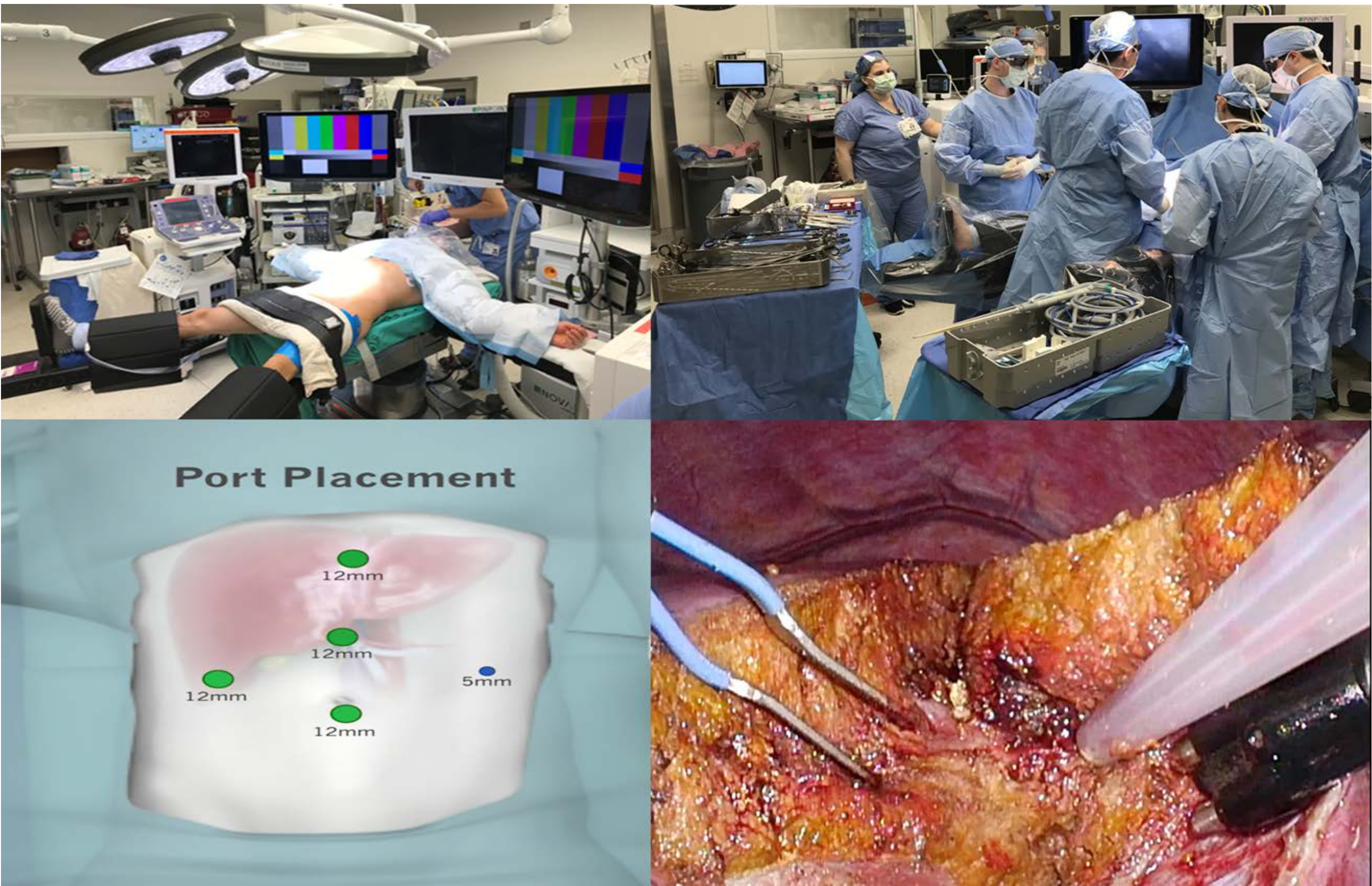


	Period I (N = 150)	Period II (N = 150)	Period III (N = 150)
Approach			
Laparoscopic	85 (56.7)	120 (80.0)	147 (98.0)
Hand assisted	43 (28.7)	23(15.3)	1 (0.7)
Robotic	22 (14.7)	7 (4.7)	2(1.3)
Type of resection			
Minor	131 (87.3)	138 (92.0)	81 (54.0)
Major	19 (12.7)	12 (8.0)	69 (46.0)
Conversion to open (yes)	10 (6.7)	36 (24.0)	21 (14.0)
Blood Transfusion (yes)	19 (12.7)	9 (6.0)	4 (2.7)
Complication Total	20 (13.3)	20 (13.3)	18 (12.0)
LOS	3 (2-5)	4 (2-6)	4 (2-5)



What we changed to overcome stagnation

Standardization



Changed almost all instruments



Team organization and proctorship

- Share surgery schedule in team
- Multiple staff scrub in together for advanced lap hepatectomy (major or difficult location)
- A specialized nurse team for lap hepatectomy was organized
- Financial support from institute
- A surgeon from outside United States who has large experience in laparoscopic liver surgery joined our team as a proctor