

## CURRICULUM VITAE

### Francesca Ratti, MD

#### I. PERSONAL INFORMATION

**Date of Birth:** 07/06/1984

**Place of Birth:** Vimercate (Monza Brianza), Italy

**Citizenship:** Italian

**Home address and telephone:**

**Professional address and telephone:**

Hepatobiliary Surgery Division,  
Scientific Institute San Raffaele,  
Via Olgettina 60, 20132, Milan, Italy.

#### II. CURRENT POSITION

Staff Surgeon at Hepatobiliary Surgery Division, Department of Surgery, Scientific Institute San Raffaele, University Vita-Salute San Raffaele, Milan, Italy.

#### III. EDUCATION

- *Scuola di Specializzazione in Chirurgia Generale (General Surgery) at Università Vita-Salute San Raffaele*

Final vote: 70/70 cum laude

Title of thesis: Clinical and biological impact of the implementation of fast-track perioperative programs in complex liver resections: a propensity score-based analysis between open and laparoscopic approach (Discussant: Prof. R.Rosati; Co-discussant: Dott. L. Aldrighetti)

- *Diploma Scuola Nazionale ACOI di Chirurgia Epatica*

Date: 16-11-2012

Director: Prof. L.Capussotti

- *ATLS certification (Advanced Trauma Life Support)*

Date: 17-05-2012

- *Laurea Specialistica in Medicina e Chirurgia at Università Vita-Salute San Raffaele*

Final vote: 110/110 cum laude

Date: 27-07-2009

Title of thesis: ENDOTHELIN-1 AS MODULATOR OF ACUTE PHASE SHEAR STRESS RESPONSE IN LIVER SURGERY: IMPLICATIONS IN HEPATIC HEMODYNAMICS AND POSTOPERATIVE LIVER FAILURE. A PROSPECTIVE CLINICAL STUDY (Discussant: Prof. G.Ferla; Co-discussant: Dott. L. Aldrighetti)

- *Secondary school diploma: Maturità Classica at Liceo Classico ad indirizzo di ricerca San Raffaele – Milano*

Date: 2003

Vote: 100/100 cum laude

#### **IV. PREVIOUS PROFESSIONAL POSITIONS AND APPOINTMENTS**

From August 2009 to May 2010 Medical Doctor at Hepatobiliary Surgery Division – San Raffaele Hospital, Milano.

From May 2010 to November 2016 General Surgery resident at Hepatobiliary Surgery Division – San Raffaele Hospital, Milano (Chief: Dott. Luca Aldrighetti).

From November 2013 Consultant Medical Doctor at Emergency Department of Ospedale San Raffaele of Milano (Chief: Dott.Michele Carlucci).

From March 2017 Staff Surgeon at Hepatobiliary Surgery Division – San Raffaele Hospital, Milano (Chief: Dott. Luca Aldrighetti).

#### **V. SURGICAL and CLINICAL PRACTICE**

- Hepatobiliary and Pancreatic Surgery
- Laparoscopic Liver Surgery

- Gastrointestinal Surgery
- Colorectal Surgery
- Perioperative care of patients undergoing HPB Surgery
- Surgical care of patient with chronic liver failure
- Techniques to induce liver hypertrophy

## VI. RESEARCH INTERESTS AND MAIN CLINICAL TRIALS

### Biology of Liver Surgery

- Small-for-size syndrome in liver resections
- Cytokine profile in laparoscopic liver resections
- Techniques in Liver Pathophysiology and modulation of hepatic ischemia/reperfusion injury
- Stress/Systemic reactions to surgery and Coagulation Homeostasis
- Mediators of portal hypertension and postoperative liver failure (i.e. Endothelin)
- Use of corticosteroids and their protective role in liver surgery

### Surgery

- Techniques for parenchymal transection in liver surgery
- Advances in laparoscopic liver surgery (i.e. new devices, LESS)
- Robotic Surgery
- Development of prognostic score systems in liver surgery (i.e. blood transfusions, postoperative liver failure)
- ERAS (Enhanced Recovery After Surgery) program in liver surgery

### Hepatobiliary Surgical Oncology

- Liver metastases from colorectal cancer:
  - Neoadjuvant chemotherapy and liver resection
  - Prognostic factors and outcomes
  - Synchronous liver metastases
- Primitive liver tumors (Cholangiocarcinoma / Hepatocellular Carcinoma)
  - Prognostic factors and outcomes

### Minimally invasive techniques

- Clinical and oncological outcomes
- Difficulty scores
- New technologies
- National Registry (I Go MILS – Italian Group of Minimally Invasive liver surgery)

## VII. SCIENTIFIC PRODUCTION

<b>Scientific Papers</b>	<b>206</b>
Full Papers	47
Abstracts of meeting presentations	144
PubMed-cited Papers	42
Scopus-cited Papers	43
Indexed Papers	45
<b>Cumulative IF (JCR 2014)</b>	<b>124.07</b>
Mean n of citations/year	15.11
Mean IF (JCR 2010)	2.9
<b>H-Index (Scopus)</b>	<b>9</b>

Member of scientific societies (Società Italiana Chirurgia, Società Polispecialistica Italiana Giovani Chirurghi, Società Lombarda Chirurgia, I Go MILS)

Board member of the Società Polispecialistica Italiana Giovani Chirurghi from July 2015 (as HPB national coordinator first and as board counselor then)

Peer Reviewer for national and international oncological and surgical journals.

Faculty member and discussant regarding oncological and surgical topics during national and international meetings (more than 50 events)

Book production : L. Aldrighetti, F.Cetta, G. Ferla (editors) in collaboration with **F.Ratti**. Benign tumors of the liver, 2015 Springer-Verlag Italia, Milano

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## VIII. AWARDS

Best Oral Presentation at 10<sup>th</sup> World IHPBA Congress, Parigi 1-5 Luglio 2012. **RATTI F.**, Cipriani F., Catena M., Paganelli M., Ferla F., Aldrighetti L. Liver failure in patients treated with chemotherapy for colorectal liver metastases: role of chronic disease scores in liver surgery.

Podium Presentation at 115° Congresso Nazionale della Società Italiana di Chirurgia – Torino, 13-16 October 2013. Cipriani F, **RATTI F**, Gagliano A, Catena M, Paganelli M, Aldrighetti L. Resezioni epatiche laparoscopiche in pazienti con pregressa chirurgia addominale e non: studio case-matched.

Best Oral Presentation at 11st World Congress of International Hepato-Pancreato-Biliary Association – Seoul, 22-27 March 2014. **RATTI F**, Cipriani F, Catena M, Gagliano A, Paganelli M, Aldrighetti L. Comparative analysis of left versus right sided resection in patients undergoing liver surgery for Klatskin tumor: can lesion side be considered a prognostic factor?

Podium Presentation at 116° Congresso Nazionale Società Italiana Chirurgia, Roma 12-15 October 2014. **RATTI F**, Schadde E, Masetti M, Massani M, Zanello M, Serenari M, Cipriani F, Bonariol L, Bassi N, Aldrighetti L, Jovine E. Strategie per incrementare il tasso di reseccabilità di pazienti con metastasi epatiche da neoplasia coloretale: un ulteriore passo verso le resezioni R0 nei pazienti ad alto rischio. Studio multi-istituzionale case-matched in pazienti candidati ad ALPPS versus two stage hepatectomy.

Best video award “LaparoEndoscopic Single Site (LESS) surgery for Left Lateral hepatic Sectionectomy (LLS) as an alternative to traditional laparoscopy. Selected video at 2nd International Consensus Conference on Laparoscopic Liver Resection” , during the 2nd International Consensus Conference on Laparoscopic Liver Resection; Morioka, Iwate, Japan. 3-6 October 2014

Bartolomeo Rizzi prize from AMB (Associazione Medici Brianza). Erba (MB), 18 December 2014.

“Eccellenza della tecnica” prize, awarded by Lamborghini for video “Evolution of laparoscopic right hepatectomy” (Ratti F, Aldrighetti L) during the 117th congress of the Società Italiana di Chirurgia (Milano, October 2015).

“Migliore Podium Presentation” for the project “Clinical models of hepatic regeneration: strategies to induce hypertrophy of the future liver remnant before major hepatic resection” during the Congresso Congiunto delle Società Scientifiche Italiane di Chirurgia (Roma, 25-29 September 2016).

## IX. **SELECTED SCIENTIFIC PRODUCTION**

- ✓ **RATTI F**, Cipriani F, Ferla F, Catena M, Paganelli M, Aldrighetti L. *Hilar cholangiocarcinoma: preoperative liver optimization with multidisciplinary approach. Toward a better outcome.* World J Surg. 2013 Jun;37(6):1388-96.
- ✓ **RATTI F**, Cipriani F, Gagliano A, Catena M, Paganelli M, Aldrighetti L. *Defining indications to ALPPS procedure: technical aspects and open issues.* Updates Surg. 2014 Mar;66(1):41-9.
- ✓ Schadde E, Ardiles V, Robles-Campos R, Malago M, Machado M, Hernandez-Alejandro R, Soubrane O, Schnitzbauer A, Raptis D, Tschuor C, Petrowsky H, De Santibanes E, Clavien PA, on behalf of the

- ALPPS Registry Group.** *Early survival and safety of ALPPS: First Report of the International ALPPS Registry.* Ann Surg. 2014 Nov;260(5):829-36; discussion 836-8.
- ✓ **RATTI F,** Cipriani F, Catena M, Paganelli M, Aldrighetti L. *Liver failure in patients treated with chemotherapy for colorectal liver metastases: Role of chronic disease scores in patients undergoing major liver surgery. A case-matched analysis.* Eur J Surg Oncol. 2014 Nov;40(11):1550-6.
  - ✓ **RATTI F,** Schadde E, Masetti M, Massani M, Zanello M, Serenari M, Cipriani F, Bonariol L, Bassi N, Aldrighetti L, Jovine E. *Strategies to increase resectability of patients with Colorectal Liver Metastases: A multi-center case-match analysis of ALPPS versus conventional Two-Stage Hepatectomy.* Ann Surg Oncol 2015;22(6):1933-42
  - ✓ **RATTI F,** Cipriani F, Piozzi G, Catena M, Paganelli M, Aldrighetti L. *Comparative Analysis of Left-Versus Right-sided Resection in Klatskin Tumor Surgery: can Lesion Side be Considered a Prognostic Factor?* J Gastrointest Surg. 2015 Jul;19(7):1324-33
  - ✓ **RATTI F,** Catena M, Di Palo S, Staudacher C, Aldrighetti L. *Laparoscopic Approach for Primary Colorectal Cancer Improves Outcome of Patients Undergoing Combined Open Hepatic Resection for Liver Metastases.* World J Surg; 39(10):2573-82.
  - ✓ **RATTI F,** Cipriani F, Ariotti R, Giannone F, Paganelli M, Aldrighetti L. *Laparoscopic major hepatectomies: current trends and indications. A comparison with the open technique.* Updates Surg. 2015; 67(2):157-67
  - ✓ **RATTI F,** Cipriani F, Ariotti R, Gagliano A, Paganelli M, Catena M, Aldrighetti L. *Safety and feasibility of laparoscopic liver resection with associated lymphadenectomy for intrahepatic cholangiocarcinoma: a propensity-score based case-matched analysis from a single institution.* Surgical Endoscopy, 2015; 30(5):1999-2010.
  - ✓ **RATTI F,** Pulitanò C, Catena M, Paganelli M, Aldrighetti L. *Serum levels of endothelin-1 after liver resection as an early predictor of postoperative liver failure. A prospective study.* Hepatol Res. 2015 46(6):529-40.
  - ✓ **RATTI F,** Cipriani F, Reineke R, Catena M, Paganelli M, Comotti L, Beretta L, Aldrighetti L. *Intraoperative monitoring of stroke volume variation versus central venous pressure in laparoscopic liver surgery: a randomized prospective comparative trial.* HPB, 2016; 18(2):136-44.
  - ✓ **RATTI F,** Catena M, Di Palo S, Staudacher C, Aldrighetti L. *Impact of totally laparoscopic combined management of colorectal cancer with synchronous hepatic metastases on severity of complications: a propensity-score-based analysis.* Surg Endosc, 2016 (epub ahead of print)

- ✓ **RATTI F**, D'Alessandro V, Cipriani F, Giannone F, Catena M, Aldrighetti L. *Influence of body habitus on feasibility and outcome of laparoscopic liver resections: a prospective study*. J Hepatobiliary Pancreatic Sci 2016; 23(6):373-81.
- ✓ **RATTI F**, Cipriani F, Catena M, Paganelli M, Aldrighetti L. *Approach to hepatocaval confluence during laparoscopic right hepatectomy: three variations on a theme*. Surg Endosc 2016 (epub ahead of print)
- ✓ **RATTI F**, Cipriani F, Reineke R, Catena M, Comotti L, Beretta L, Aldrighetti L. *Impact of ERAS approach and minimally-invasive technique on outcome of patients undergoing liver surgery for hepatocellular carcinoma*. Digestive and Liver Disease 2016
- ✓ Wong-Lun-Hing EM, van Dam RM, van Breukelen GJ, Tanis PJ, **RATTI F**, van Hillegersberg, Slooter GD, de Wilt JH, Llem MS, de Boer MT, Klaase JM, Naumann UP, Aldrighetti LA, Dejong CH, Orange II collaborative group. *Randomized clinical trial of open versus laparoscopic left lateral sectionectomy within an enhanced recovery after surgery programme (Orange II study)*. Br J Surg 2017 (epub ahead of print)
- ✓ Martínez-Cecilia D, Cipriani F, Vishal S, **RATTI F**, Tranchart H, Barkhatov L, Tomassini F, Montalti R, Halls M, Troisi RI, Dagher I, Aldrighetti L, Edwin B, Abu Hilal M. *Laparoscopic Versus Open Liver Resection for Colorectal Metastases in Elderly and Octogenarian Patients: A Multicenter Propensity Score Based Analysis of Short- and Long-term Outcomes*. Ann Surg. 2017 Jun;265(6):1192-1200.
- ✓ Scuderi V, Barkhatov L, Montalti R, **RATTI F**, Cipriani F, Pardo F, Tranchart H, Dagher I, Rotellar F, Abu Hilal M, Edwin B, Vivarelli M, Aldrighetti L, Troisi RI. *Outcome after laparoscopic and open resections of posterosuperior segments of the liver*. Br J Surg. 2017 May;104(6):751-759.
- ✓ De Cobelli F, Marra P, **RATTI F**, Ambrosi A, Colombo M, Damascelli A, Sallemi C, Gusmini S, Salvioni M, Diana P, Cipriani F, Venturini M, Aldrighetti L, Del Maschio A. *Microwave ablation of liver malignancies: comparison of effects and early outcomes of percutaneous and intraoperative approaches with different liver conditions: New advances in interventional oncology: state of the art*. Med Oncol. 2017 Apr;34(4):49.
- ✓ Fiorentini G, **RATTI F**, Cipriani F, Palombo D, Catena M, Paganelli M, Aldrighetti L. *Minimally invasive approach to intrahepatic cholangiocarcinoma: technical notes for a safe hepatectomy and lymphadenectomy*. ALES 2017.
- ✓ Cipriani F, Fantini C, **RATTI F**, Lauro R, Tranchart H, Halls M, Scuderi V, Barkhatov L, Edwin B, Troisi RI, Dagher I, Reggiani P, Belli G, Aldrighetti L, Abu Hilal M. *Laparoscopic liver resections for hepatocellular carcinoma. Can we extend the surgical indication in cirrhotic patients?* Surg Endosc. 2018 Feb;32(2):617-626.

- ✓ Smerieri N, Fiorentini G, **RATTLE**, Cipriani F, Belli A, Aldrighetti L. *Laparoscopic left hepatectomy for mucinous cystic neoplasm of the liver*. Surg Endosc. 2018 Feb;32(2):1068-1069.
- ✓ Aldrighetti L, **RATTLE**, Cillo U, Ferrero A, Ettorre GM, Guglielmi A, Giuliante F, Calise F; Italian Group of Minimally Invasive Liver Surgery (I GO MILS). *Diffusion, outcomes and implementation of minimally invasive liver surgery: a snapshot from the I Go MILS (Italian Group of Minimally Invasive Liver Surgery) Registry*. Updates Surg. 2017 Sep;69(3):271-283.