



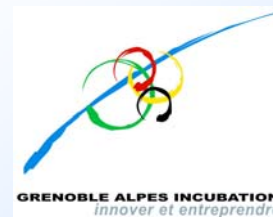
Robotic assistance to endoscopic surgery



UNIVERSITÉ
JOSEPH FOURIER
SCIENCE, TECHNOLOGIE, MÉDECINE



Floralis
Cultivons
l'innovation



GRENOBLE ALPES INCUBATION
innover et entreprendre

Rhône-Alpes
Région



CRÉATION D'ENTREPRISES DE TECHNOLOGIES INNOVANTES
Ministère
Éducation
nationale
enseignement
supérieur et
recherche
ministère délégué
à l'enseignement supérieur
et à la recherche



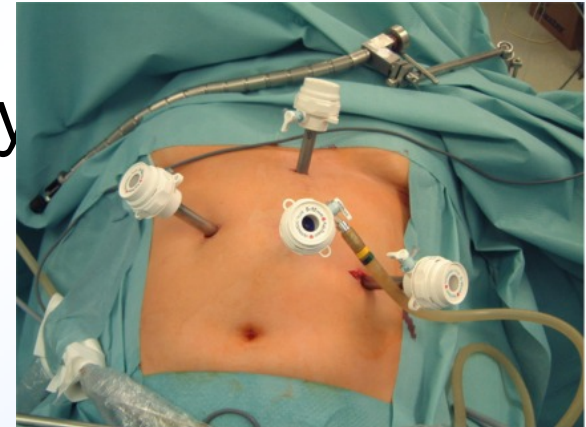
LYON AUVERGNE RHÔNE-ALPES

Laparoscopic Surgery



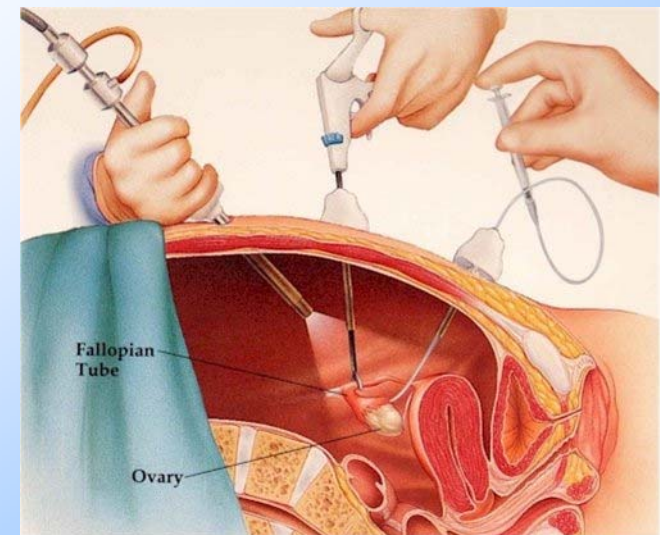
➤ Laparoscopic surgery

- Abdomen mini invasive surgery
- Less pain, less blood loss, shorter hospital stay



➤ Endoscope

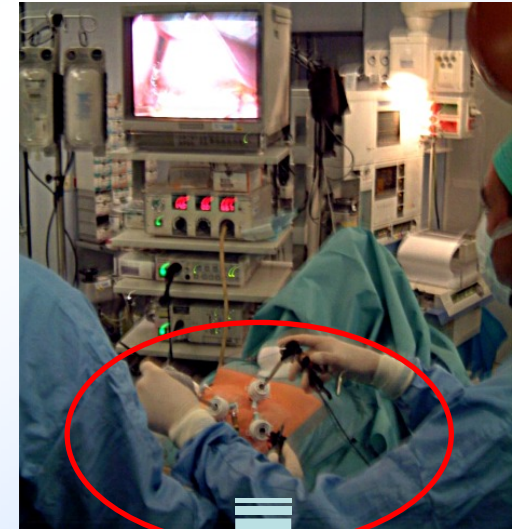
- Controlled by an assistant



Scope Holder Robot



- ✓ **Surgeon takes back control of endoscopic vision**
 - Offers a « third hand » to surgeon for endoscope positioning
- ✓ **Improve stability and quality of endoscopic image**
 - Precise and reproducible movement
- ✓ **Efficacy and security proven equivalent to a human assistant**
- ✓ **But...**



Existing technologies



AESOP®



ENDOASSIST®



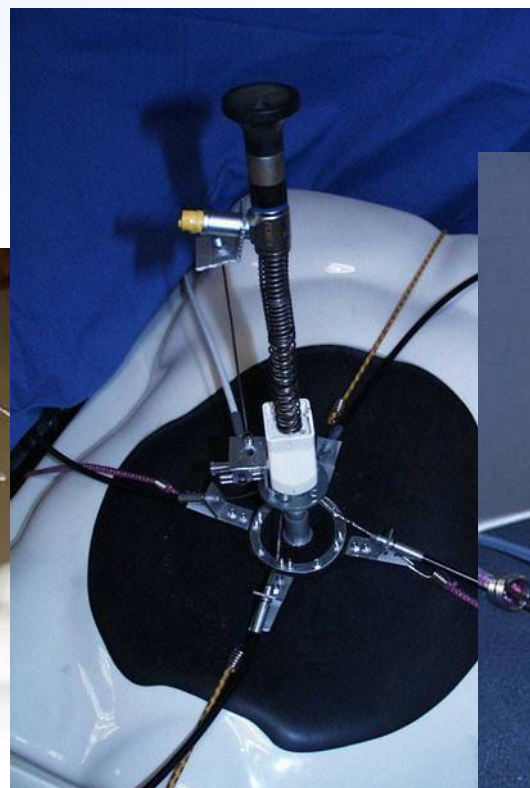
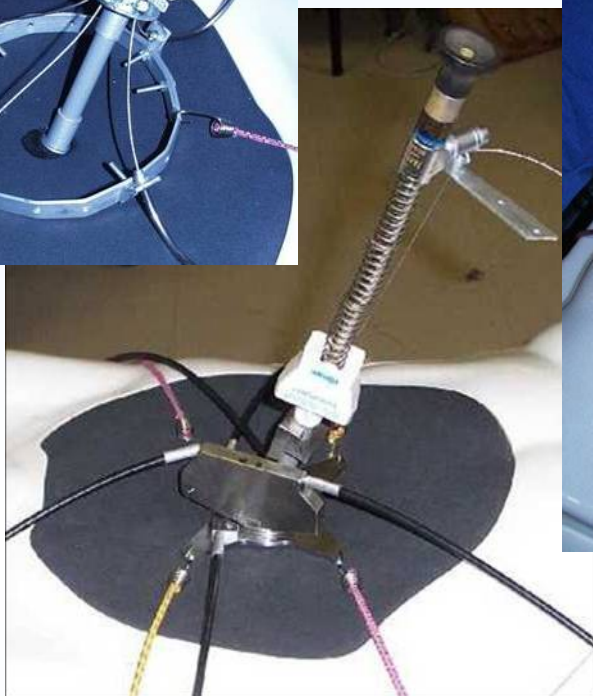
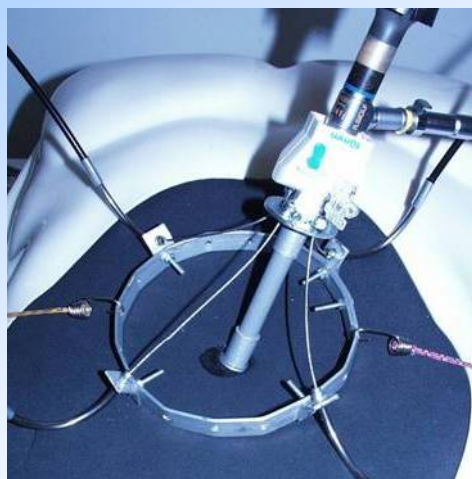
LAPMAN®

- **Complex, Heavy, Expensive**
- **Cumbersome both in operating field and around the table**

TIMC-GMCAO (UJF) Research



✓ 2000 - 2006



EndoControl Miniaturized Robot



✓ Pre-clinical Validation

✓ Industrial Prototype
– Late 2006

✓ CE Approved in May 2007
– Clinical Validation

✓ Commercialization EU

