The legacy of the scalpel

John Hunter's contribution to the evolution of surgical instruments: 1800's to today.

Jasmin Blake

John Hunter – The Founder of Scientific Surgery

Lived 1728–1793

Pioneer of anatomical precision and experimental surgery.

"Don't think,
try the experiment."

Hunter’s innovative approach

- Hunter refined and adapted a wide range of existing tools
- His modifications addressed the specific clinical challenges he encountered
- Specialised dissection tools and finer scalpels
- Improved accuracy and precision
- Informed new surgical techniques

Hunter's innovations and refinements

Aneurysm needles, 1800's

Aneurysm needle, 2016

Hydrocele trocar, 1800's

Laparoscopic hydrocele trocar, 2017

Modified bone saw, 1800's

Electric bone saw, 2021

19th century instruments

A shift from artisan tools to specialised instruments focused on enhancing tactile feedback and precision.

Surgeons began to appreciate the importance of the uniformity and weight of instruments.

Haemostatic forceps

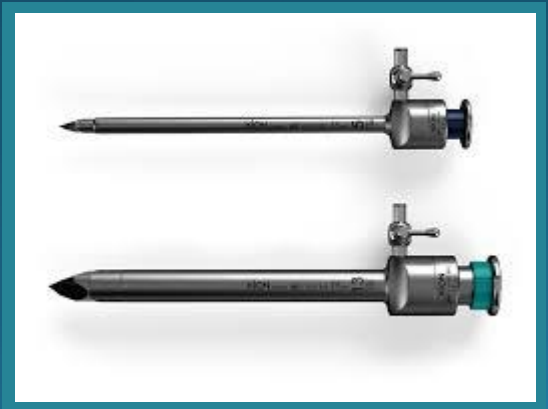
Ergonomic scissors

Scalpel

The 20th century: a period of rapid advancement

"I realize that here was a new tool which might possibly be utilized."

Harvey W. Cushing speaking on Dr. Bovie's device in action, 1924.



Instructions for Connecting and Operating

THE IMPROVED
DAVIS-BOVIE ELECTRO-SURGICAL UNIT

READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO USE THE MACHINE. SPARK GAP ADJUSTMENT IS THE MOST IMPORTANT FACTOR IN PREPARING THE DAVIS-BOVIE FOR SERVICE. ADJUST GAPS CAREFULLY AS OUTLINED ON PAGE 4

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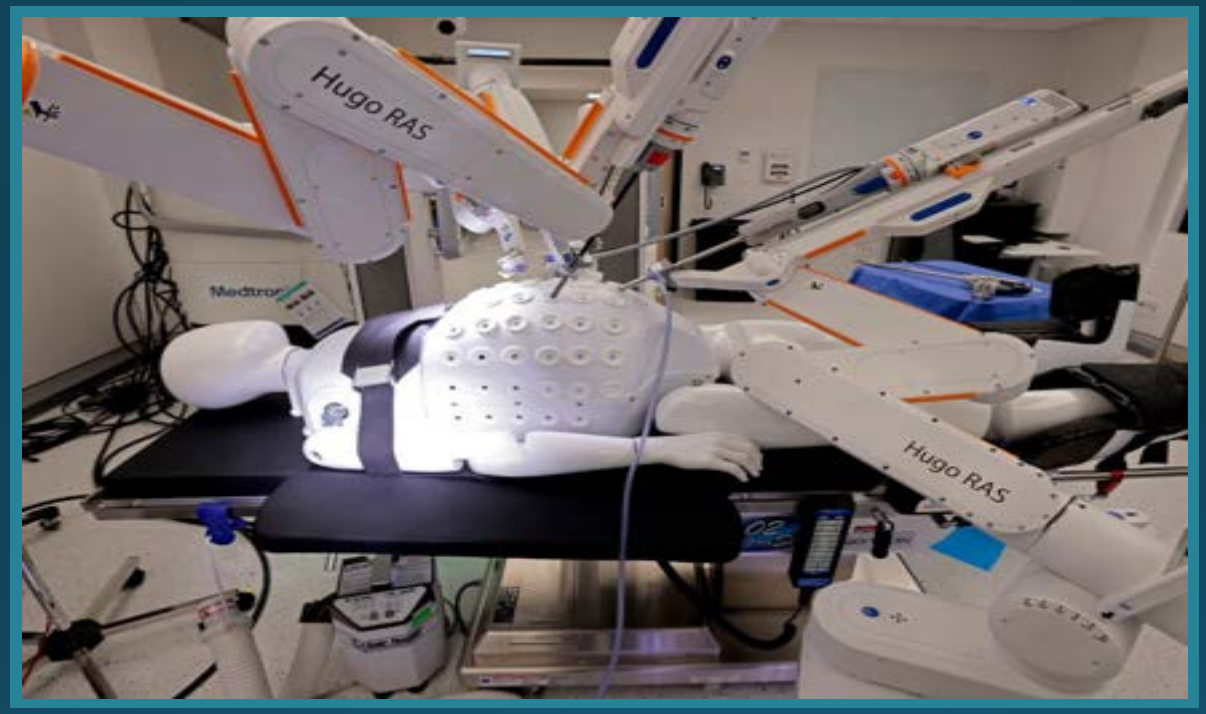
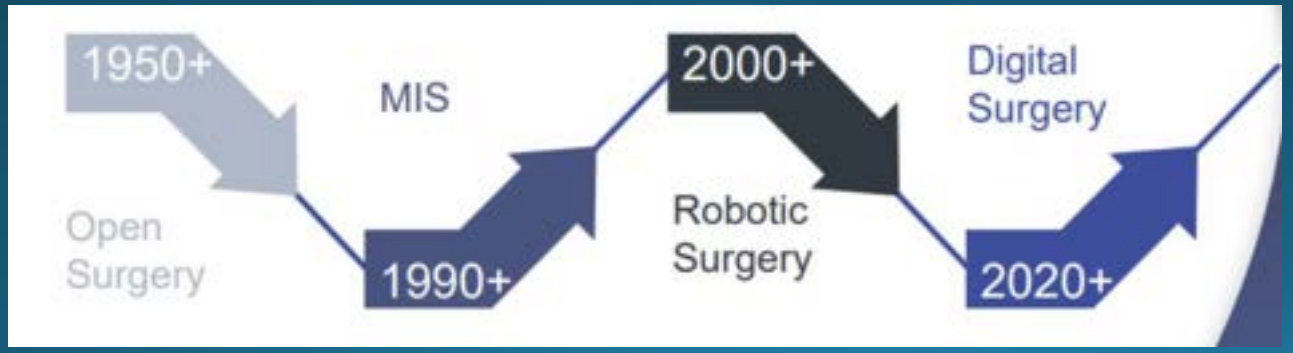
Modern innovations and the future



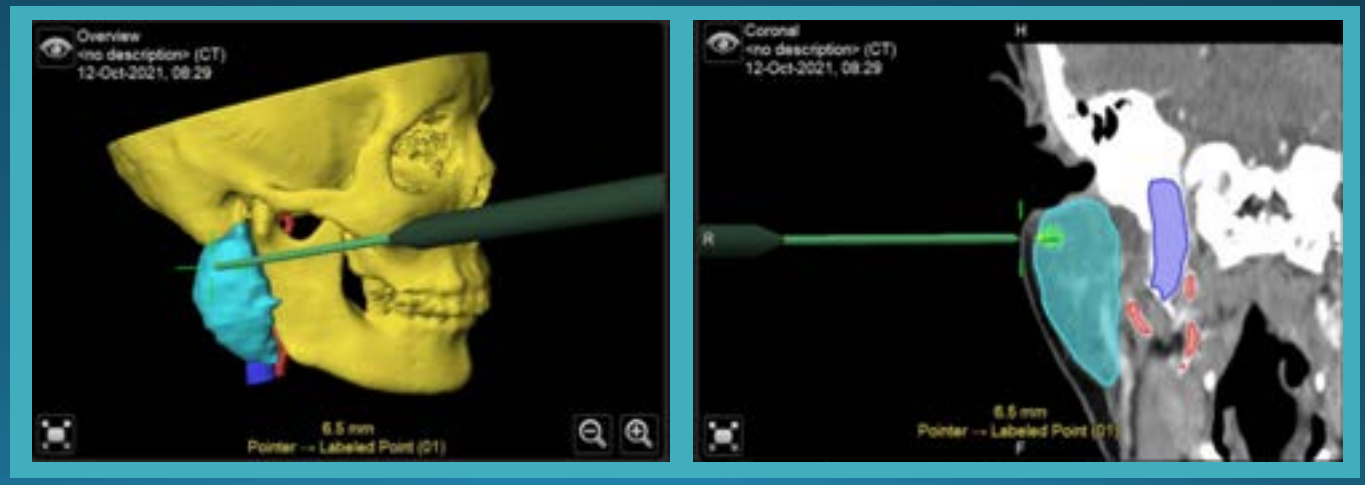


Hunter’s enduring principles

Hunter’s era required radical open procedures, often without anaesthesia.

A parotid tumour surgery, then vs. now

Today, minimally invasive, highly precise techniques with real-time 3D planning define modern parotid surgery.



From scalpel to system

"A surgeon's hands are their most valuable tools, but their mind is their greatest asset."

John Hunter

While the tools have changed dramatically, the surgeon's hands remain central to the art and science of surgery.