



INNOVATION AND TRAINING IN VERSIUS® MODULAR ROBOTIC SURGER: A NEW OPORTUNITY TO BECOME A ROBOTIC SURGEON IN MEXICO

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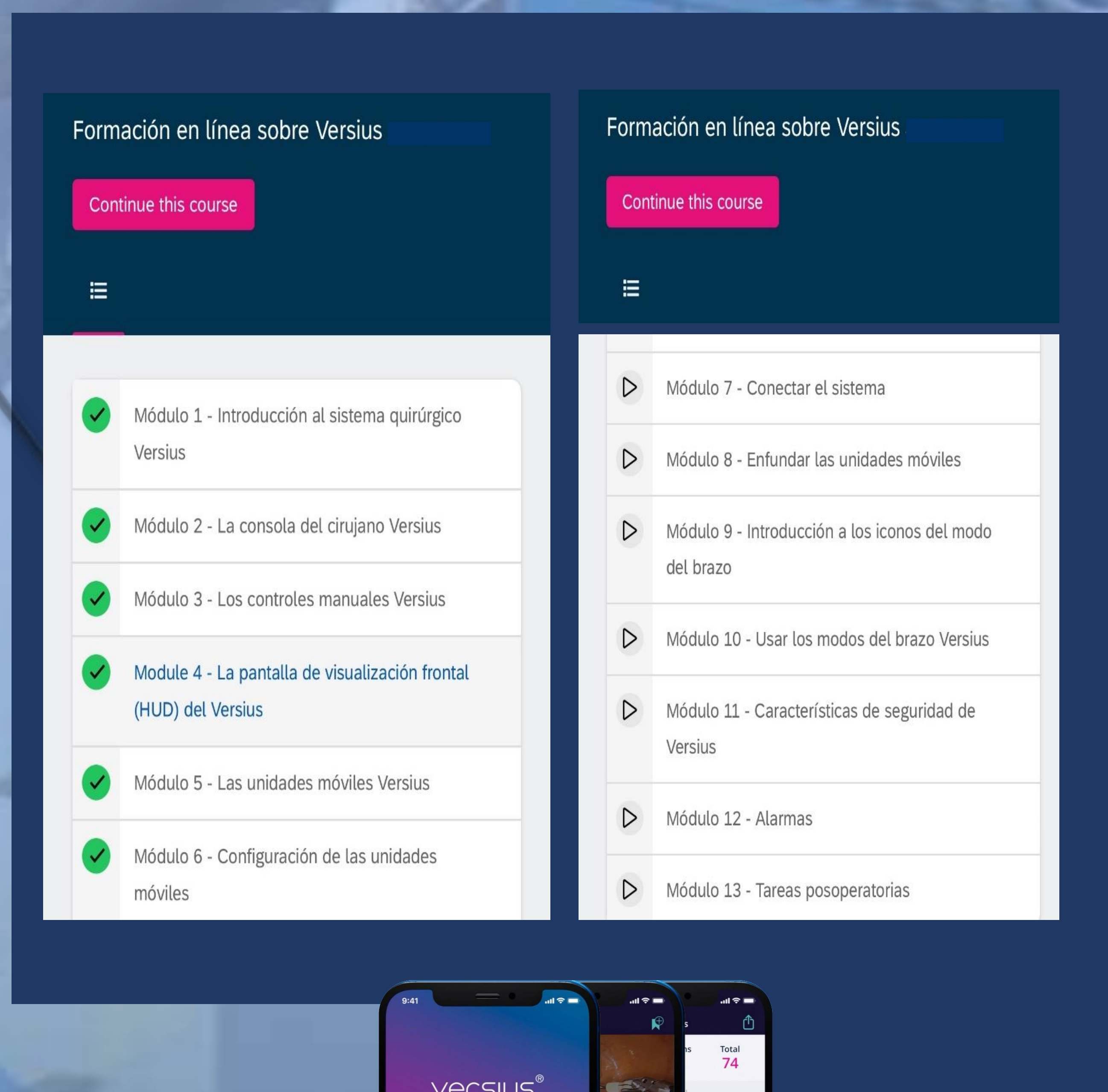
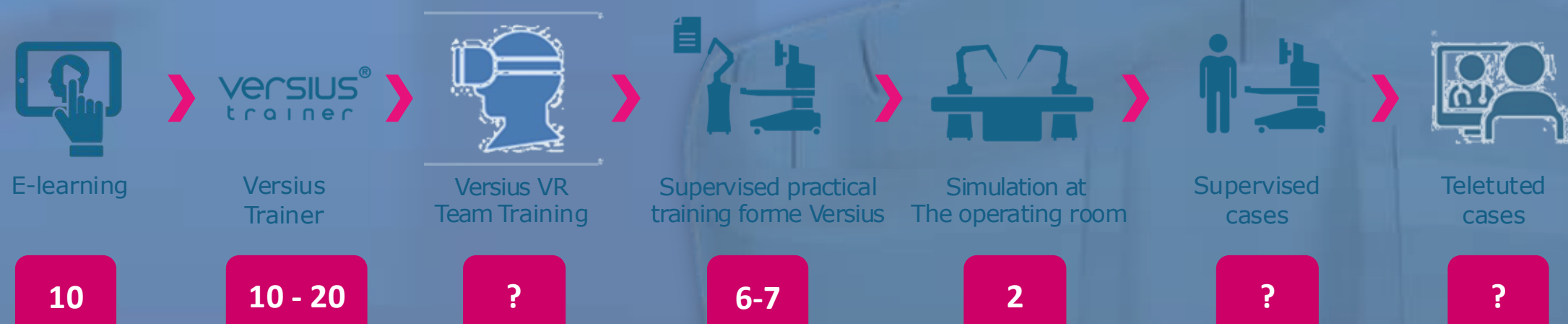
INTRODUCTION

Robotic surgery represents the current trend in minimally invasive surgery. In order to introduce its practice into hospitals, it is necessary to carry out a training and certification process in all areas involved in an operating room: surgical nursing, technicians, biomedical professionals, anesthesiologists, and surgeons.

Training in the use of Versius® must be provided, evaluated, and measured using the CMR Surgical® platform in different phases in a safe, controlled, and standardized environment, with the support of a simulation console, training boxes, and mannequins. This training is mandatory and supervised by an expert surgeon (proctor) in order to transfer knowledge and training to patients for the safe use of the new robotic surgery platform.

CMR VERSIUS® SURGICAL TRAINING

- ☐ Versius e-learning
- ☐ Versius trainer
- ☐ Supervised practical training
- ☐ Simulation
- ☐ Tutor-led case studies
- ☐ Versius Trainer in virtual reality



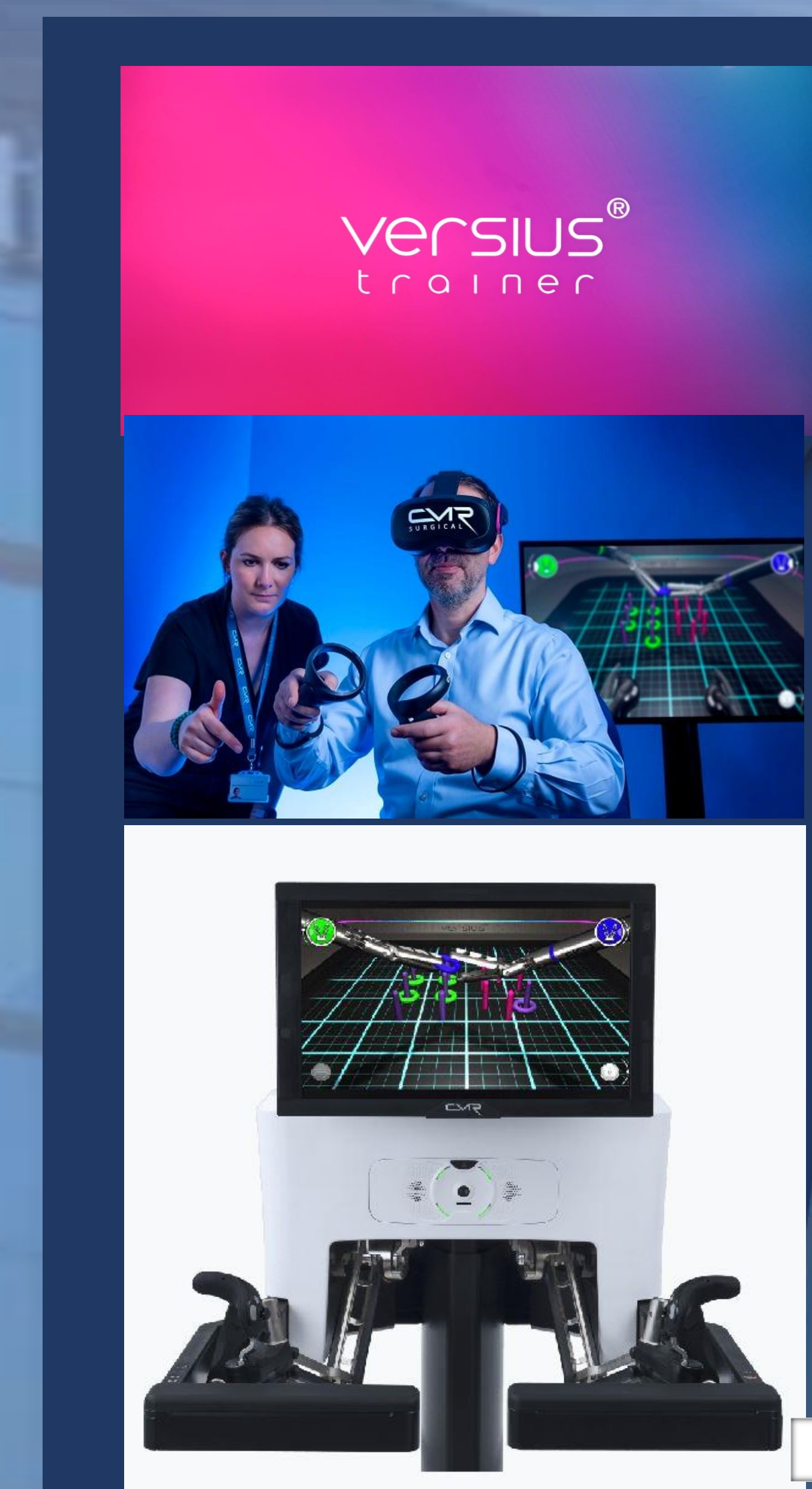
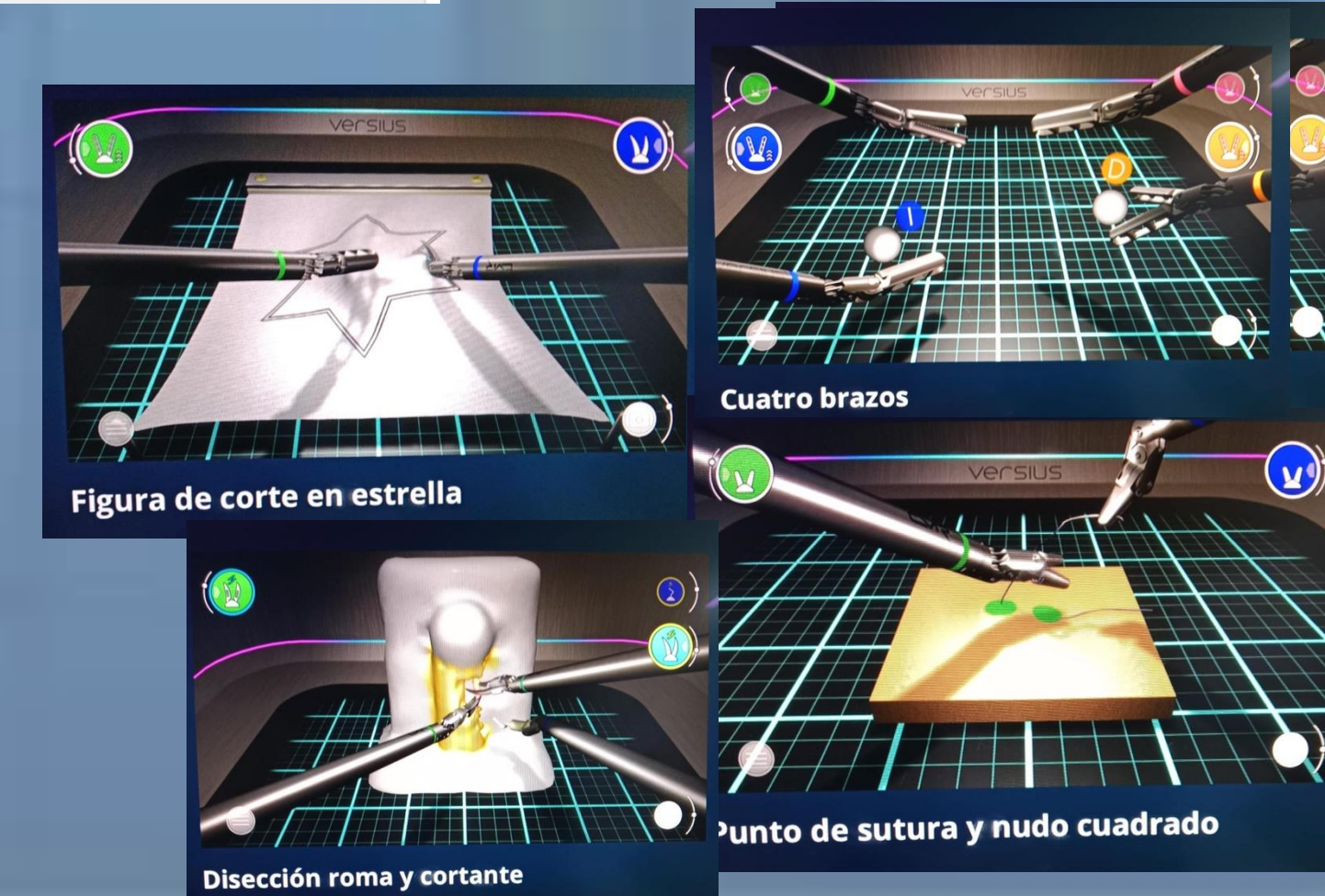
RESULTS

The average duration of theoretical training was 12 hours, the virtual phase lasted an average of 13 hours, simulation on inanimate models lasted 8 to 10 hours, and simulation in the operating room lasted 2 to 3 hours. These times varied according to the technical skill of each surgeon.

The duration of surgical procedures varied according to the complexity of the pathology and surgical skill.

VERSIUS® TRAINER

Entrenador Versius	Tareas Versius Trainer	NÚMERO DE INTENTOS
Formación práctica supervisada de Versius	1. Navegación por instrumentos	1 intento
Simulación	2. Control de la mandíbula	6 intentos
Casos con tutor/tutoría telemática	3. Control del endoscopio *	6 intentos
Formación adicional	4. Multiobjetivo *	5 intentos
Formación en equipo con RV Versius	5. Cuatro brazos	1 intento
Versius Trainer en realidad	6. Electrocirugía *	4 intentos
Entrenador Versius	7. Transferencia de clavijas *	5 intentos
Formación práctica supervisada de Versius	8. Manipulación de cartas *	4 intentos
Simulación	9. Círculo de corte de patrones	24 intentos
Casos con tutor/tutoría telemática	10. Estrella de corte de patrones *	12 intentos
	11. Bucle de alambre 1	1 intento
	12. Bucle de alambre 2	3 intentos
	13. Disección roma y aguda	4 intentos
	14. Impulsión de la aguja *	23 intentos
	15. Punto y nudo cuadrado *	9 intentos
	16. Sutura continua	5 intentos



SUPERVISED PRACTICAL TRAINING

Learning Objectives:

- ✓ Dry-Box simulator skills
- ✓ Mannequin skills
- ✓ Demonstrate the ability to configure the robotic system
- ✓ Demonstrate the aseptic dressing and covering of mobile units and visual equipment
- ✓ Demonstrate the ability to respond appropriately to alarms and safety functions
- ✓ Acquire the ability to troubleshoot the Versius® system
- ✓ Train as an assistant in robotic surgeries performed by Versius®
- ✓ Demonstrate knowledge of the disassembly, cleaning, and disinfection of the Versius® system
- ✓ Acquire the ability to perform basic surgical skills on the Versius® training platform



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