

# “Realitat Assistencial de l’Ecografia 3D - 4D en reproducció”

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**Dr. Juan José Guillén**

Médico Especialista en Reproducción

**Clínica EUGIN**



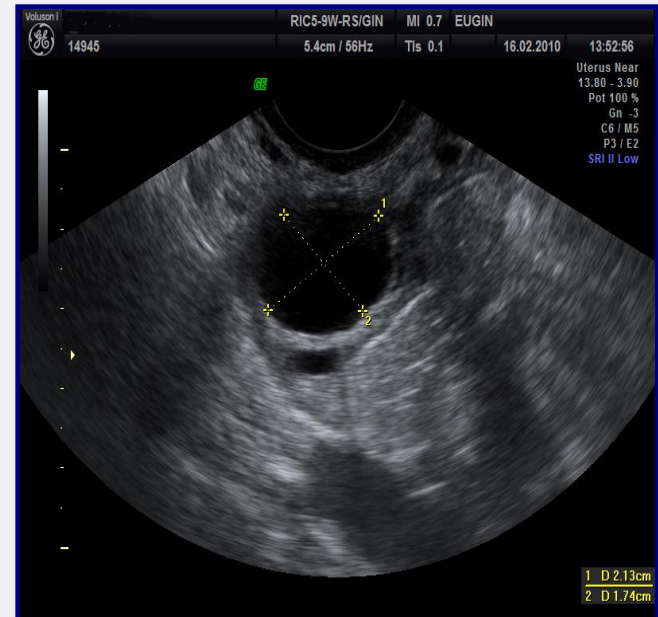
**2D**  
**Diámetro**

**Monitorización  
ecográfica**

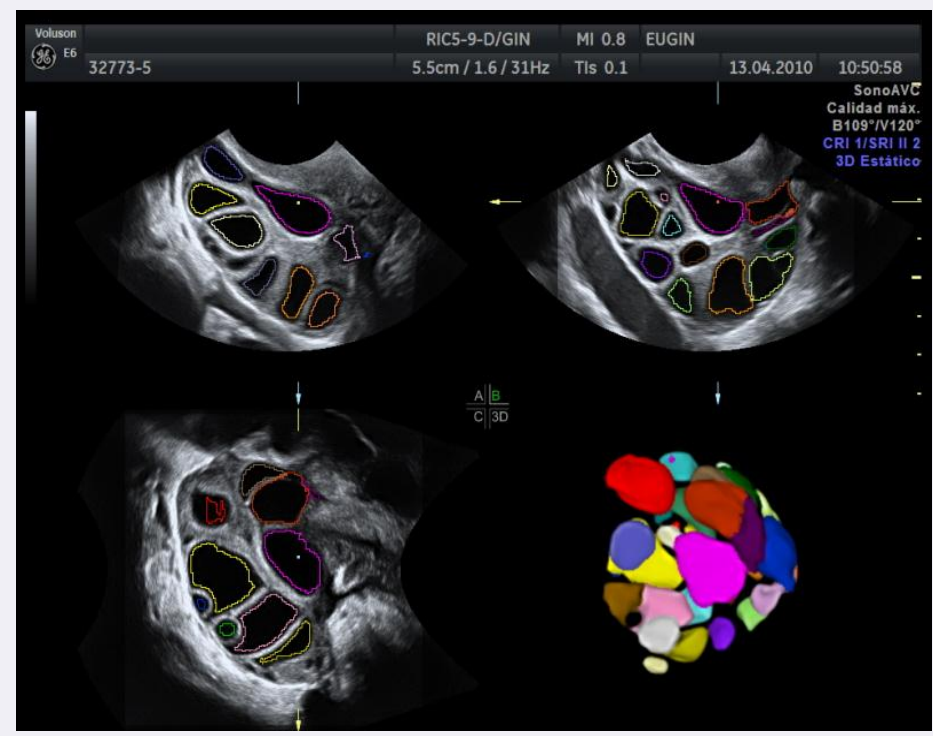
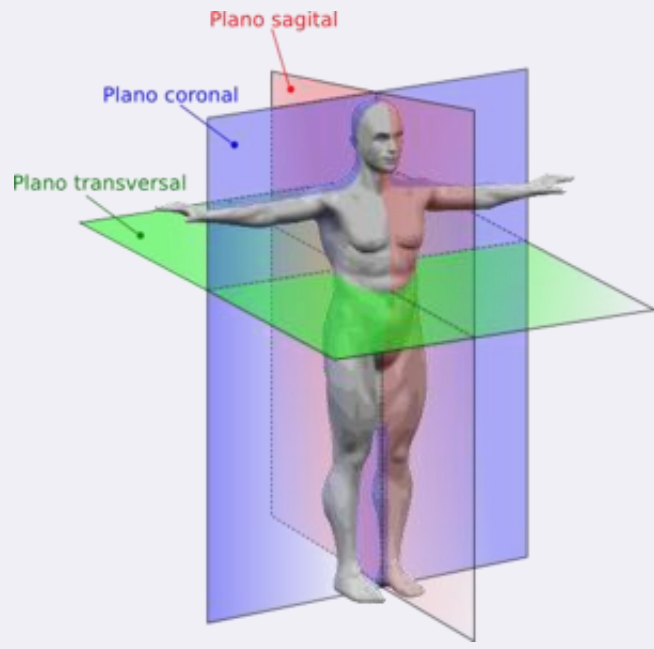
**3D**  
**Volumen**

## TECNOLOGÍA 2D

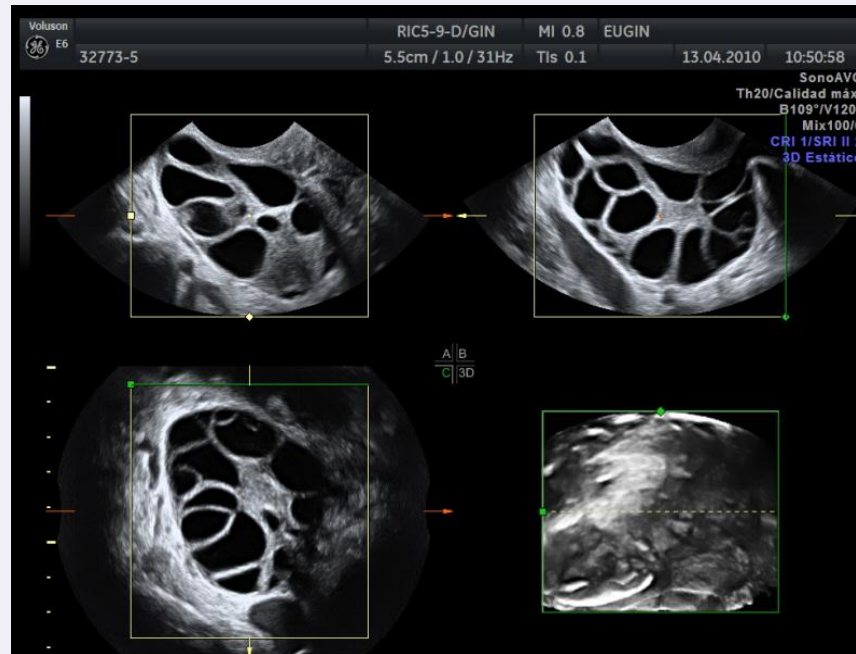
Análisis **manual**  
Mayor nº folículos  
**2D AA.**



## TECNOLOGÍA 3D



**Captamos**  
**Delimitamos**



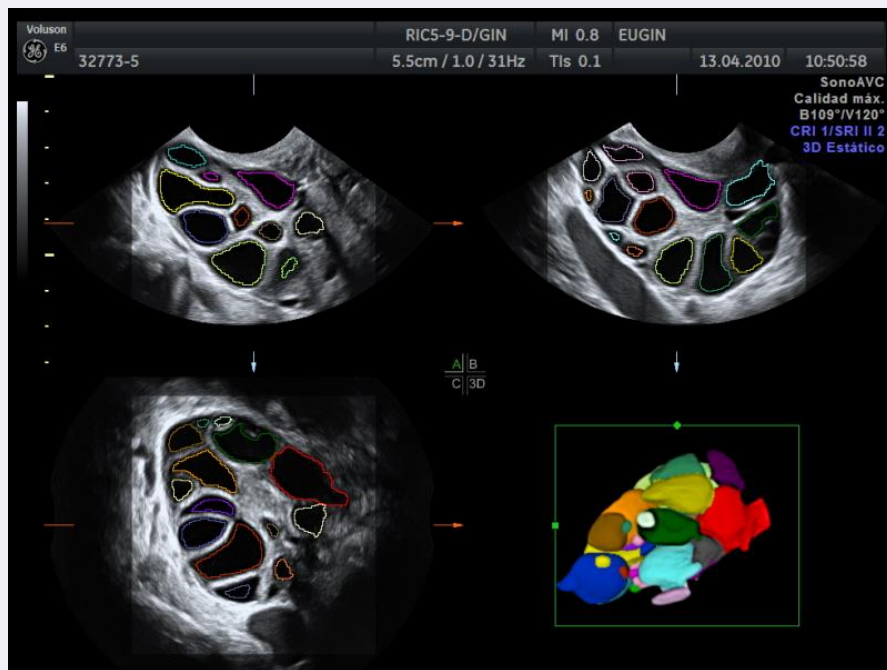
**Análisis Automático**

**Identifica**

**Delimita contorno**

**Crea curva cerrada**

**Define área**



**EUGIN**

Nombre: \_\_\_\_\_  
 Pac. ID: **32773-5** FDN: \_\_\_\_\_  
 Indicación: \_\_\_\_\_ Sexo: \_\_\_\_\_  
 FUR: \_\_\_\_\_ Día del ciclo: \_\_\_\_\_  
 Día de estim.: **14** Ovulación: \_\_\_\_\_

Ovario: Izq.  
 N.º total: 40

Núm.	d(V) mm	dx mm	dy mm	dz mm	mn. d mm	V cm <sup>3</sup>
<b>1</b>	16.1	24.4	16.8	11.8	17.7	2.19
2	15.7	20.1	15.1	13.6	16.3	2.03
3	14.8	24.7	16.7	11.3	17.6	1.69
4	14.7	22.1	18.2	9.4	16.6	1.67
5	13.9	20.8	14.3	11.0	15.4	1.41
6	13.9	19.4	17.0	9.8	15.4	1.40
7	13.6	23.4	12.0	10.6	15.3	1.33
8	13.3	19.1	15.5	8.8	14.5	1.24
9	13.2	17.7	13.8	10.9	14.1	1.21
10	12.8	15.5	13.7	10.6	13.2	1.09
11	12.6	22.2	12.1	9.1	14.4	1.06
12	12.2	22.1	10.3	9.4	13.9	0.95
13	11.8	18.9	14.1	7.2	13.4	0.86

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**diámetro medio (mn.d)**

**Volumen: V (cm<sup>3</sup>)**

**d(V): Volumen esfera relajada**

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T. Deutch Fertil Steril 2007

S. Salama Fertil Steril 2008



Dr Nick Raine-Fenning  
University of Nottingham

Fertility and Sterility® Vol. 91, No. 4, Supplement, April 2009 **1469**

**The overall accuracy of measurements of follicular diameter.**

Measurement method	Mean diameter (±SD), mm	Mean difference (±SD)	Range between		Time (±SD), seconds	
			ULA	LLA		
Standard, true follicular diameter	18.11 ± 3.44	0	0	0	—	
Automatic (Sono-AVC):						
Relaxed sphere diameter	17.99 ± 3.59	<b>Fiable</b>			3.00	9.34 ± 2.67
x, y, z diameter	18.13 ± 3.75				3.34	9.34 ± 2.67
Manual 2D:						
Single measure	17.94 ± 4.06	-0.23 ± 2.20	4.07	-4.53	8.60	10.43 ± 3.24
Three measures (AAB)	17.92 ± 4.08	0.14 ± 1.92	3.91	-3.63	7.54	26.36 ± 4.35 <sup>a</sup>
Manual 3D:						
Three measures (AAB)	18.11 ± 3.79	-0.08 ± 1.64	3.21	-3.33	6.41	19.33 ± 3.45 <sup>b</sup>
Three measures (ABC)	18.59 ± 3.6	-1.66 ± 1.62	1.51	-4.84	6.35	20.34 ± 3.09 <sup>b</sup>



**N. Raine-Fenning 2009**

**A. Rodríguez-Fuentes 2010**

**T. Deutch 2009**

**M. Murtinger 2009**



Dr Nick Raine-Fenning

Fertility and Sterility® Vol. 94, No. 1, June 2010 RCT (n=68 FIV).

**TABLE 2**

Comparison between SonoAVC and 2D ultrasound in relation to outcome measures of total number of stimulated follicles, oocytes retrieved, size of follicles, maturity of oocytes, fertilization rate, and embryo cleavage.

Outcome variable	2D real-time ultrasound (mean ± SD)	3D automated SonoAVC (mean ± SD)	P value
No. follicles measuring ≥ 10 mm	16.23 ± 8.54	17.53 ± 8.39	.55
No. follicles measuring ≥ 15 mm	7.47 ± 4.17	8.50 ± 3.53	.30
No. follicles measuring ≥ 18 mm	3.83 ± 2.82	4.37 ± 6.08	.40
Day of hCG administration	1.11	1.11	.06
Total no. oocytes	19.99	19.99	.81
No. mature oocytes	17.17	17.17	.64
No. fertilized oocytes	15.25	15.25	.59
Fertilization rate (%) (per mature oocyte)	73.86 ± 21.35	68.25 ± 22.76	.33
No. cleavage stage embryos	7.10 ± 4.87	7.47 ± 5.12	.78
Day 2 ET (%)	76.47	82.35	1.00
Day 3 ET (%)	23.53	17.64	.15
Biochemical pregnancy rate (%)	48	52	.85
Clinical pregnancy rate (%)	42	43	.93

**Comparable**



## Limitaciones

**Calidad de imagen**

**Post - proceso**

## Ventajas

Fiable

Reproducible

Menor tiempo de exploracion

**Reduccion significativa T<sup>0</sup> (~1/2)**

N. Raine-Fenning 2009. 6,0 min

T. Deutch 2009. 4,4 min

Rodriguez-Fuentes 2010. 5,6 min

## Comodidad

**MUCHAS GRACIAS  
POR SU ATENCIÓN**

