

**The prognostic value of ECG-gated SPECT imaging
in patients undergoing stress Tc-99m sestamibi
myocardial perfusion imaging**

J Nucl Cardiol 2004;11:253-62

PERFUSÃO (8 REGIÕES)

- Anterior (3)
 - ântero-septal (3)
 - ínfero-septal (3)
 - Inferior (3)
 - ínfero-lateral (3)
 - ântero-lateral (3)
 - ântero-apical (1)
 - ínfero-apical (1)
- 20

SEVERIDADE

0 - Normal

1 - Leve hipocaptação

2 - Moderada hipocaptação

3 - Severa hipocaptação

4 - Ausência de captação

Summed Stress Score (SSS) = 0 a 32

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- **0 ou 1 = perfusão normal**
- **2 ou 3 = perfusão levemente alterada**
- **4 ou 5 = perfusão moderadamente alterada**
- **≥ 6 = perfusão severamente alterada**

FUNÇÃO VENTRICULAR (5 REGIÕES)

- anterior

- lateral

- inferior

- septo

- ápice

Motion Score (MS) = 0 a 25

- **Score 0 = Motilidade e espessamento preservados**
- **Score 1 = Leve hipocinesia**
- **Score 2 = Moderada hipocinesia**
- **Score 3 = Severa hipocinesia**
- **Score 4 = Acinesia**
- **Score 5 = Discinesia**

Resultados : 3207 pacientes (2,24 anos de seguimento)

- Eventos cardíacos = 180 pacientes (5,6%)
 - 61 pacientes (2,2%) IM não fatal
 - 119 pacientes (3,7%) Morte cardíaca
- desconforto torácico
- > probabilidade pré-teste
- > história de doença cardíaca (IM e Revasc)
- diabéticos e hipertensos
 - Estresse farmacológico
 - ECG basal anormal
 - ECG com resposta indefinida ao estresse

Resultados - Perfusão Miocárdica

- Pacientes com alterações perfusionais ($SSS \geq 2$) = 9,5% eventos (117/1237)
- Pacientes com perfusão normal = 3,2% eventos (63/1970)
- Alterações perfusionais : \uparrow IM (1,2% \rightarrow 3,1%)
 \uparrow MC (2,0% \rightarrow 6,4%)

Quanto maior o SSS maior a razão de eventos cardíacos

Resultados - Função : *GATED-SPECT*

- Anormalidade da motilidade das paredes : maior número de eventos cardíacos

Motion Score 0 = 3,3%

Motion Score ≥ 2 = 11,6%

- FEVE anormais = > razão de eventos cardíacos (3,7% : 13,1%)

- Motion Score anormal : \uparrow IM = 1,3% \rightarrow 3,4%
 \uparrow MC = 2,0% \rightarrow 8,1%

- FEVE anormal : \uparrow IM = 1,6% \rightarrow 3,3%
 \uparrow MC = 2,1% \rightarrow 9,8%

FEVE \geq 50% ou Motion Score \leq 1 = GATED SPECT normal

Resultados - Perfusão + FEVE

FEVE	$\leq 30\%$	$> 30\%$ $< 50\%$	$\geq 50\%$
Perfusão Miocárdica Normal	3,4%	4,8%	0,8%
Def. Perf. 1 território	4,8%	2,5%	1,3%
Def. perf. Múltiplos territórios	11,2%	5,8%	1,1%

Taxa de mortalidade (anualizada)

SAX-STR

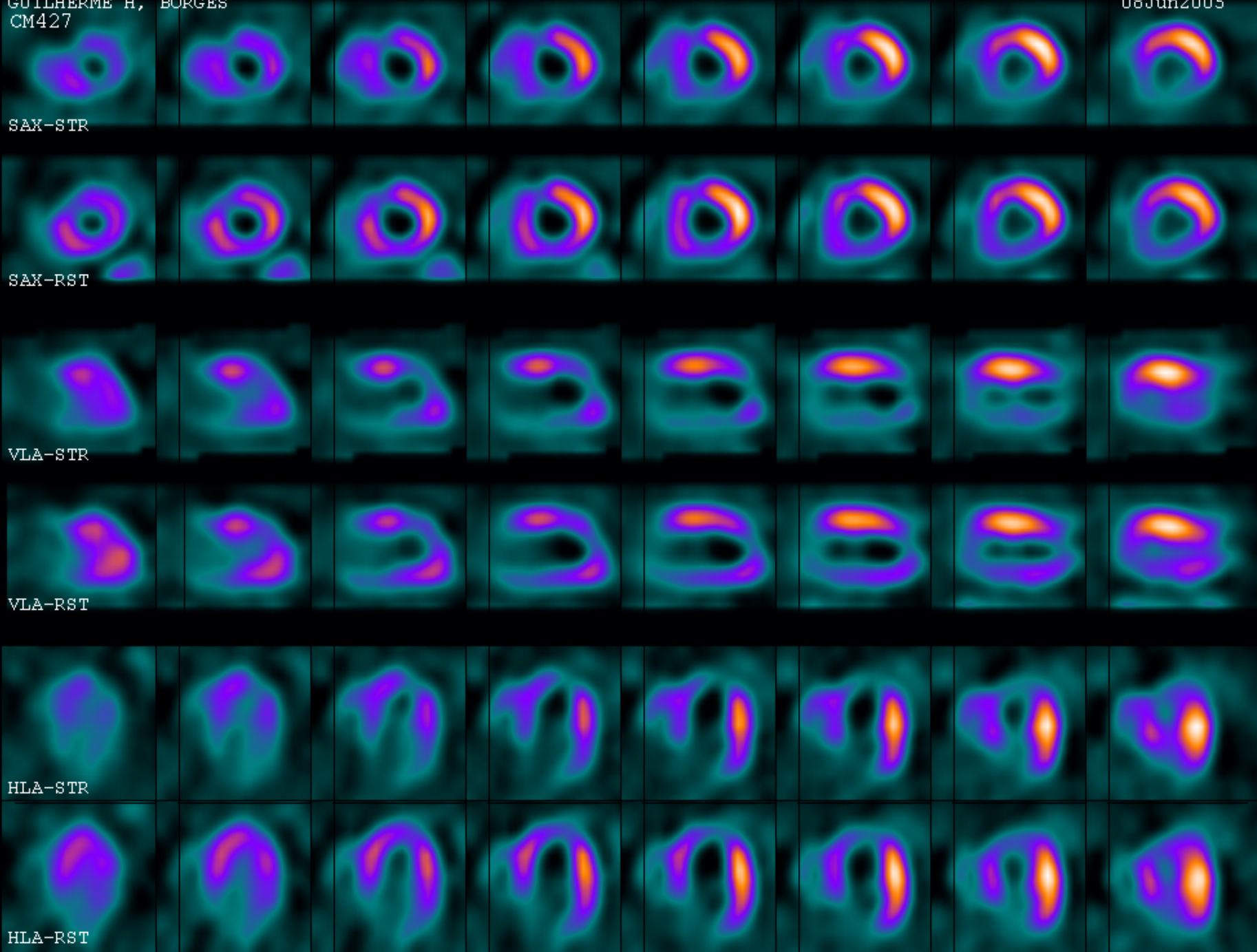
SAX-RST

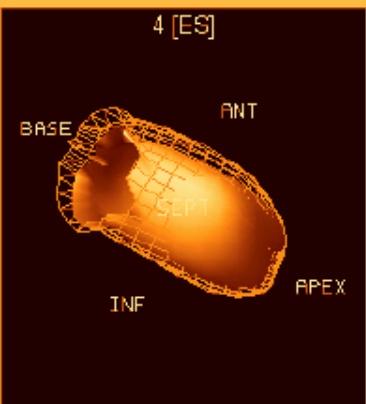
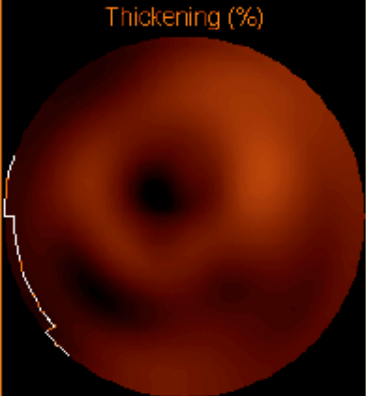
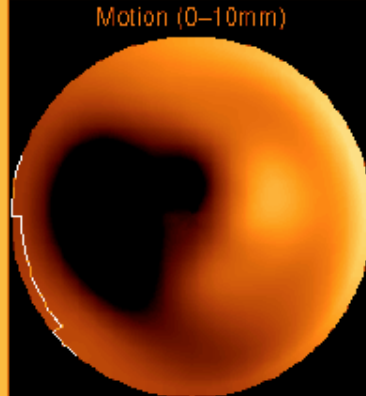
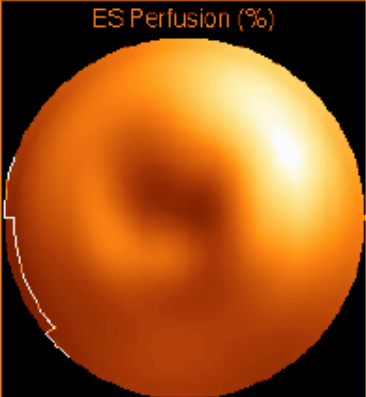
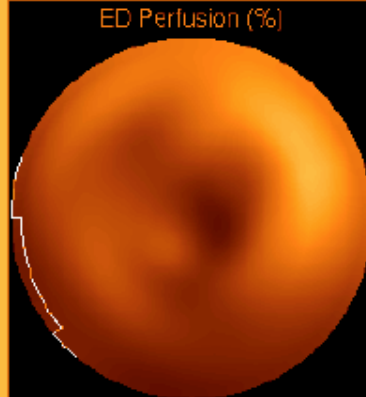
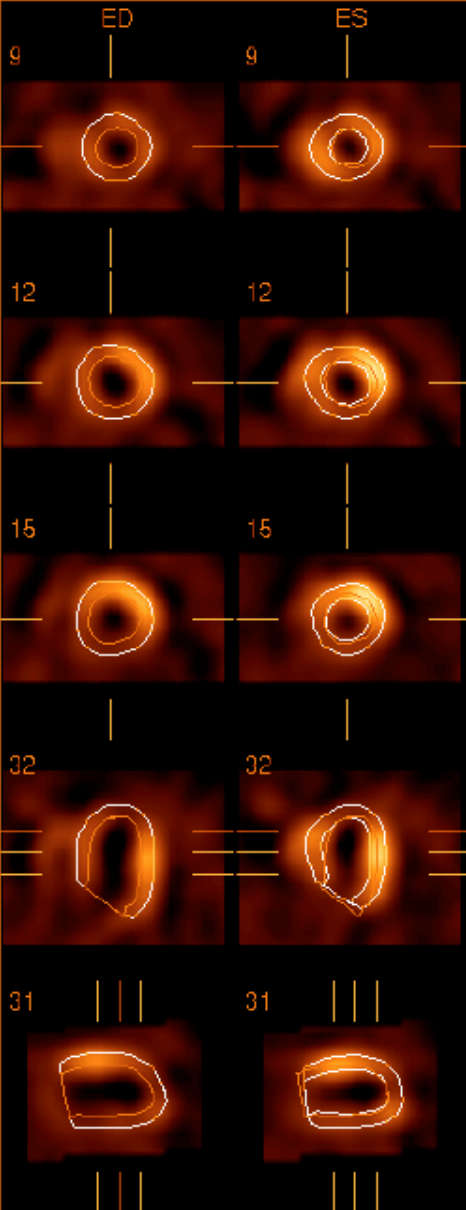
VLA-STR

VLA-RST

HLA-STR

HLA-RST

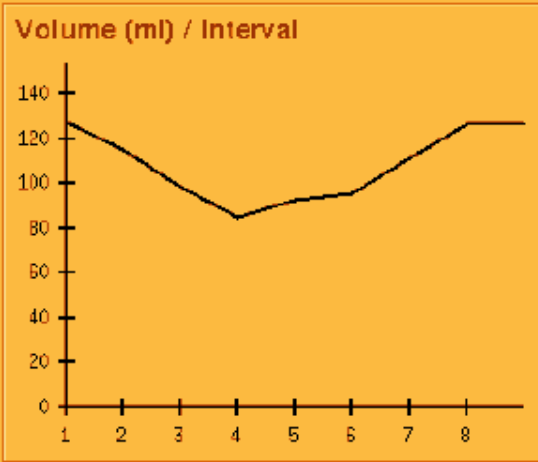


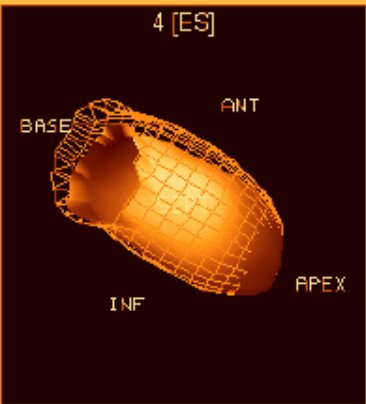
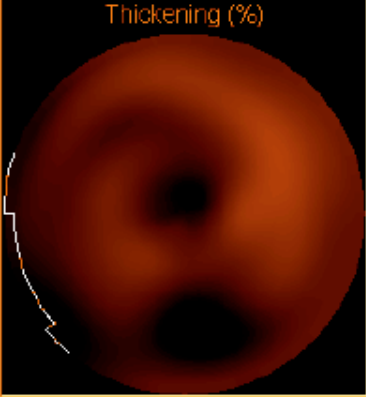
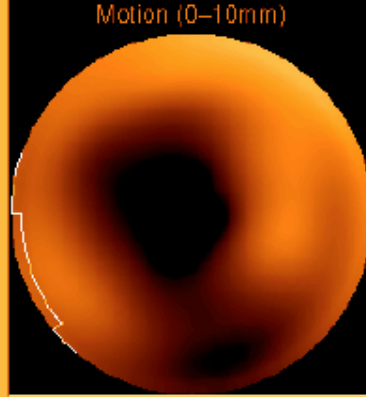
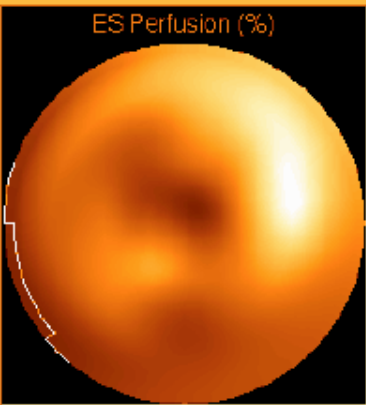
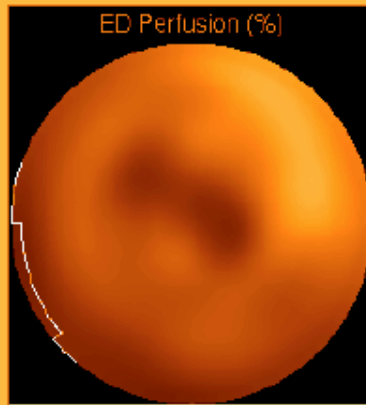
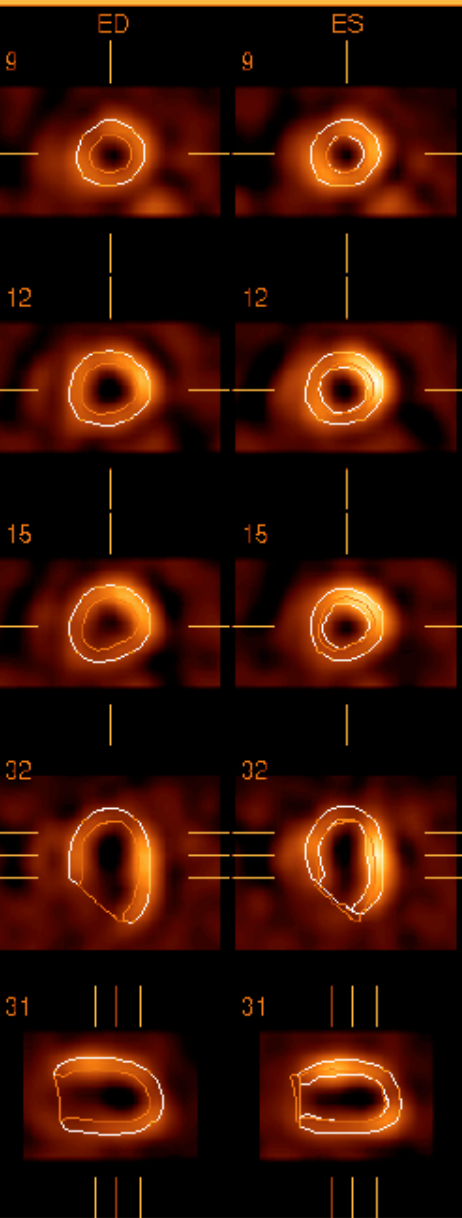


Name GUILHERME H, BORGES
Pat ID CM427
Sex MALE
Limits --
TID --
LHR --
SMS 50 **STS 26**

Type QGS Stress
Proc ID MIBI 2 DIAS
View ID PROC GS-STR
Date 06/08/2005 11:35:36
Matrix 64x64
Slices 27
Intervals 8
Mm/Vox 6.39

Volume 127ml [1]
EDV 127ml [1]
ESV 85ml [4]
EF 33%
Mot Ext 58%, 89cm² [1]
Thk Ext 47%, 73cm² [1]

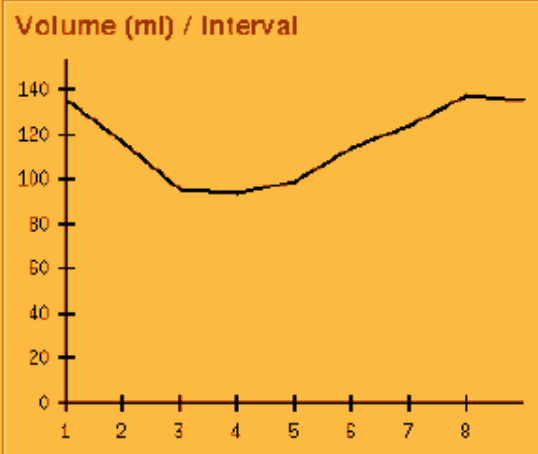


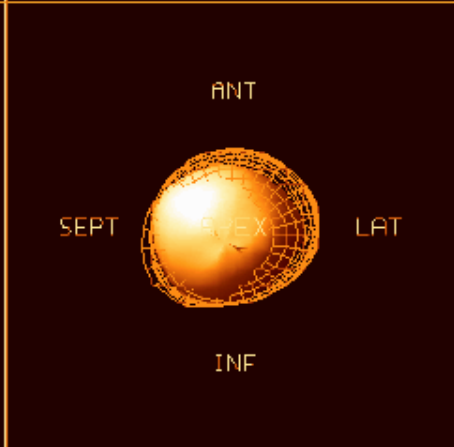
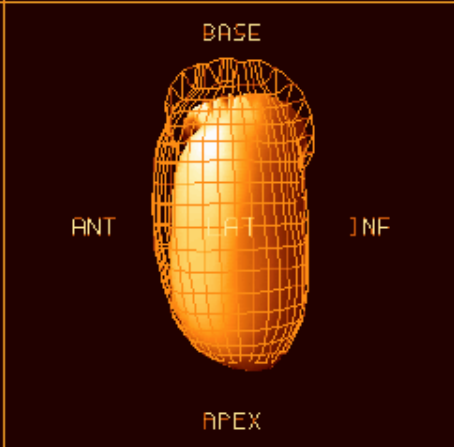
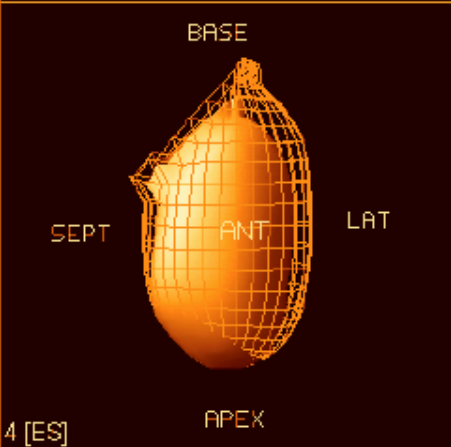
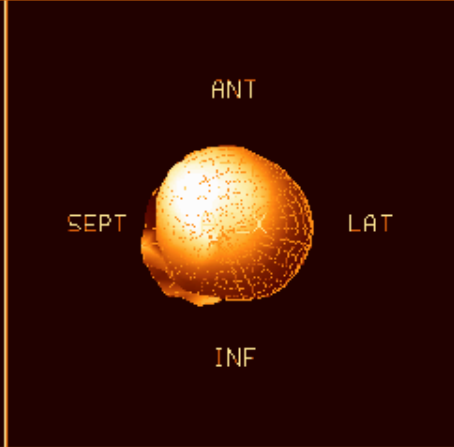
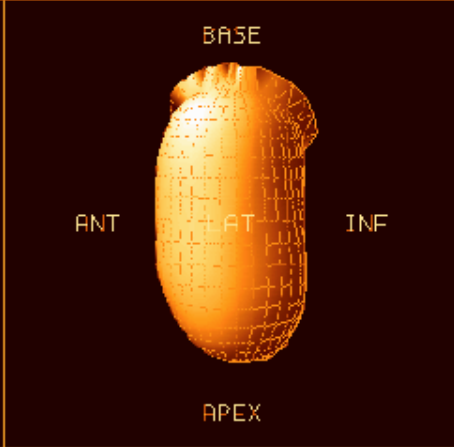
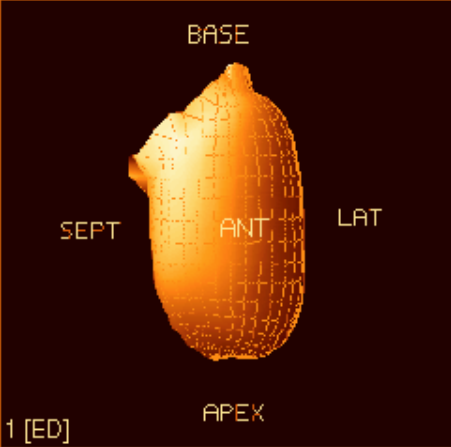


Name GUILHERME H, BORGES
Pat ID CM427
Sex MALE
Limits ---
TID ---
LHR ---
SMS 45 **STS 29**

Type Rest
Proc ID MIBI 2 DIAS
View ID PROC GS-RST
Date 06/07/2005 11:39:13
Matrix 64x64
Slices 27
Intervals 8
Mm/Vox 6.39

Volume 135ml [1]
EDV 138ml [8]
ESV 94ml [4]
EF 32%
Mot Ext 65%, 103cm² [1]
Thk Ext 49%, 79cm² [1]





Name	GUILHERME H, BORG
Pat ID	CM427
Sex	MALE
Limits	--
TID	--
LHR	--
SMS 50	STS 27 SMS 47 STS 29

Type	QGS Stress
Proc ID	MIBI 2 DIAS
View ID	PROC GS-STR
Date	06/08/2005 11:35:36
Volume	127ml [1]
EDV	127ml [1]
ESV	85ml [4]
EF	33%

Type	Rest
Proc ID	MIBI 2 DIAS
View ID	PROC GS-RST
Date	06/07/2005 11:39:13
Volume	94ml [4]
EDV	138ml [8]
ESV	94ml [4]
EF	32%

SAX-STR

SAX-RST

VLA-STR

VLA-RST

HLA-STR

HLA-RST

FEVE	$\leq 30\%$	$> 30\%$ $< 50\%$	$\geq 50\%$
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SAX-STR

SAX-RST

VLA-STR

VLA-RST

HLA-STR

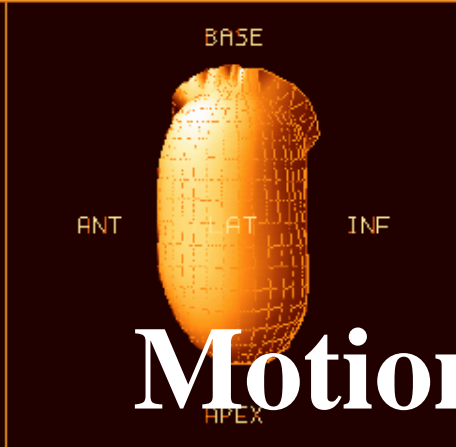
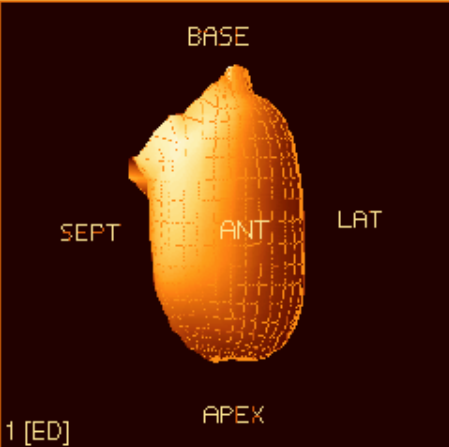
HLA-RST

Summed Stress Score

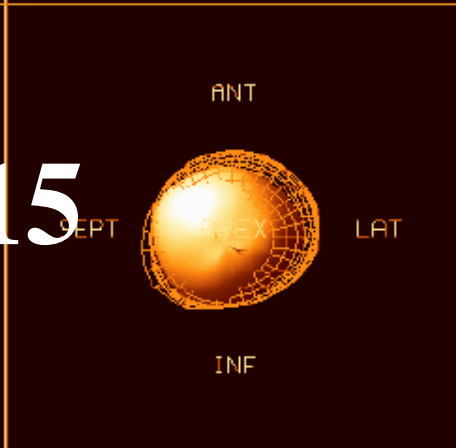
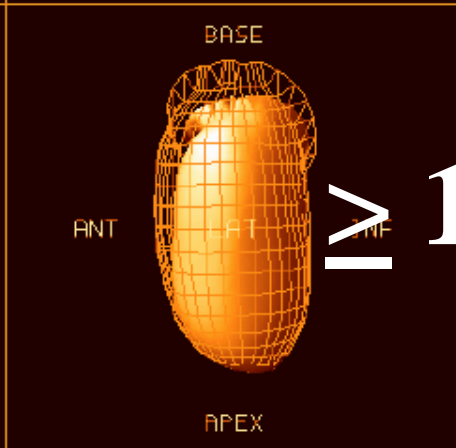
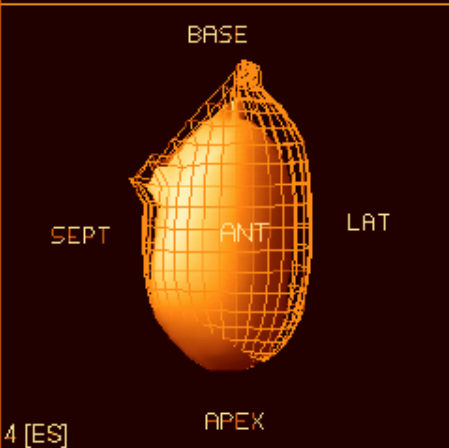
≥ 14



Label Box ED Gate Spin Surface Inner Interval 1 Interval 4 Scale 1.0 Rate 15



Motion Score



≥ 15

Name	GUILHERME H, BORG
Pat ID	CM427
Sex	MALE
Limits	--
TID	--
LHR	--
SMS 50	STS 27 SMS 47 STS 29

Type	QGS Stress
Proc ID	MIBI 2 DIAS
View ID	PROC GS-STR
Date	06/08/2005 11:35:36
Volume	127ml [1]
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Volume	94ml [4]
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EF	32%