

Not so typical atrial flutter

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Patient summary

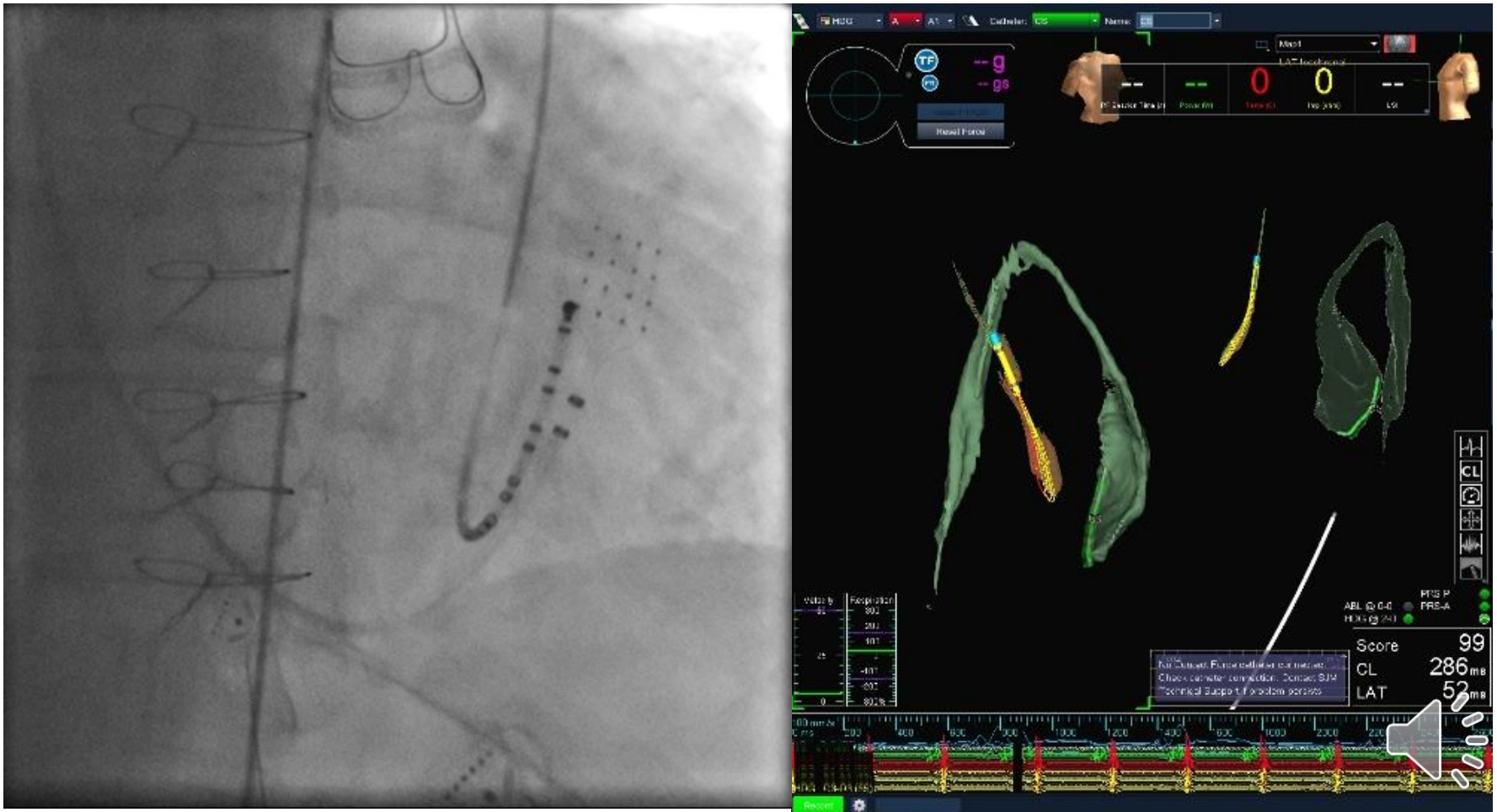
- 55 year old man
- Tetralogy of Fallot
- Previous RVOT patch, pulmonary valve replacement and tricupsid valve repair
- Incessant atrial flutter
- Deteriorating exercise tolerance
- Previous unsuccessful ablation 2015



Venous anatomy



- GA
- Steerable deca via RFV for reference and geo collection
- HD grid via R IJ
- Tacticath SE DF via R IJ



Arrhythmia Diagnosis

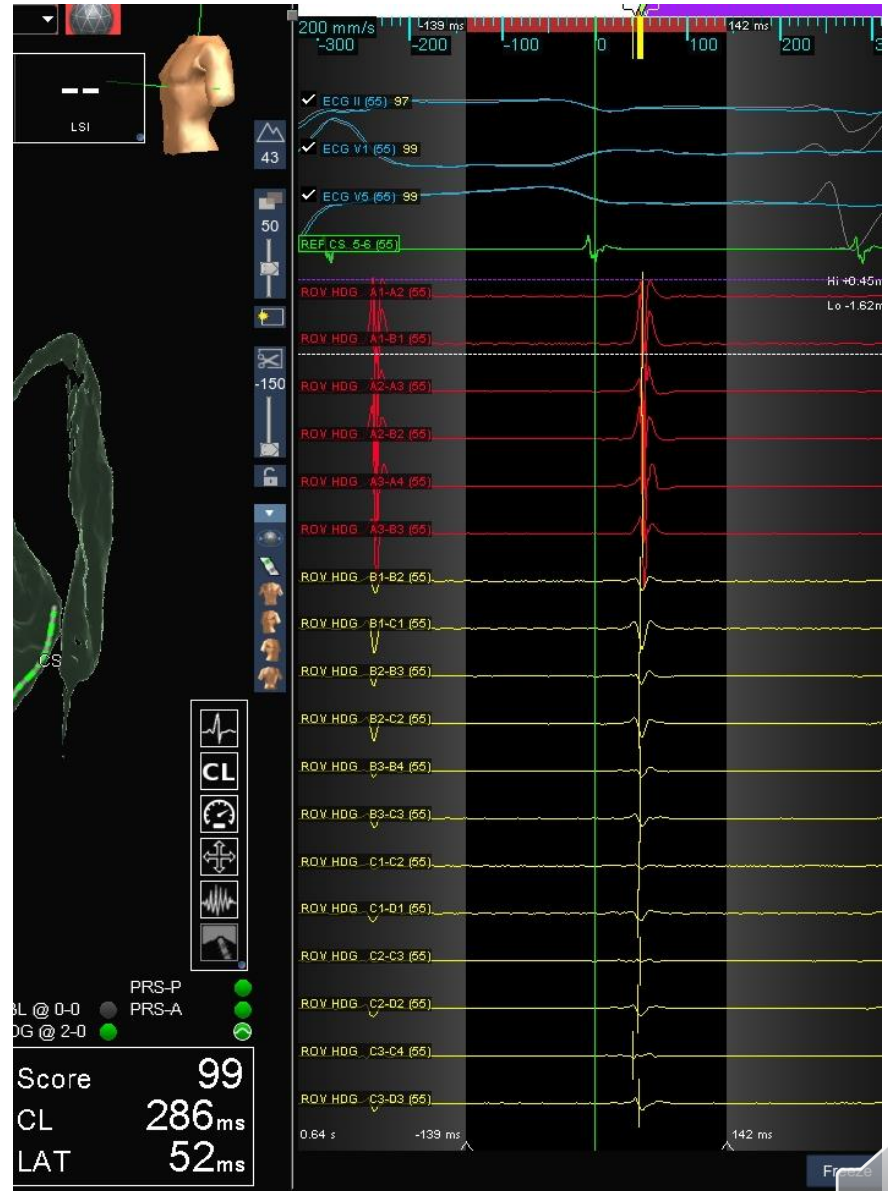
- RA from the R IJ
- Re-entrant map
- **RAI Setup**
- HD Wave
- RAI length and position 270ms – trigger cs 5-6

General Workflow

- Tachy mapping with HD grid
- CS ref min,
- HD grid $-dv/dt$
- Under GA

Key Parameters Settings

- System Reference
- Low Voltage ID **0.15 mV**



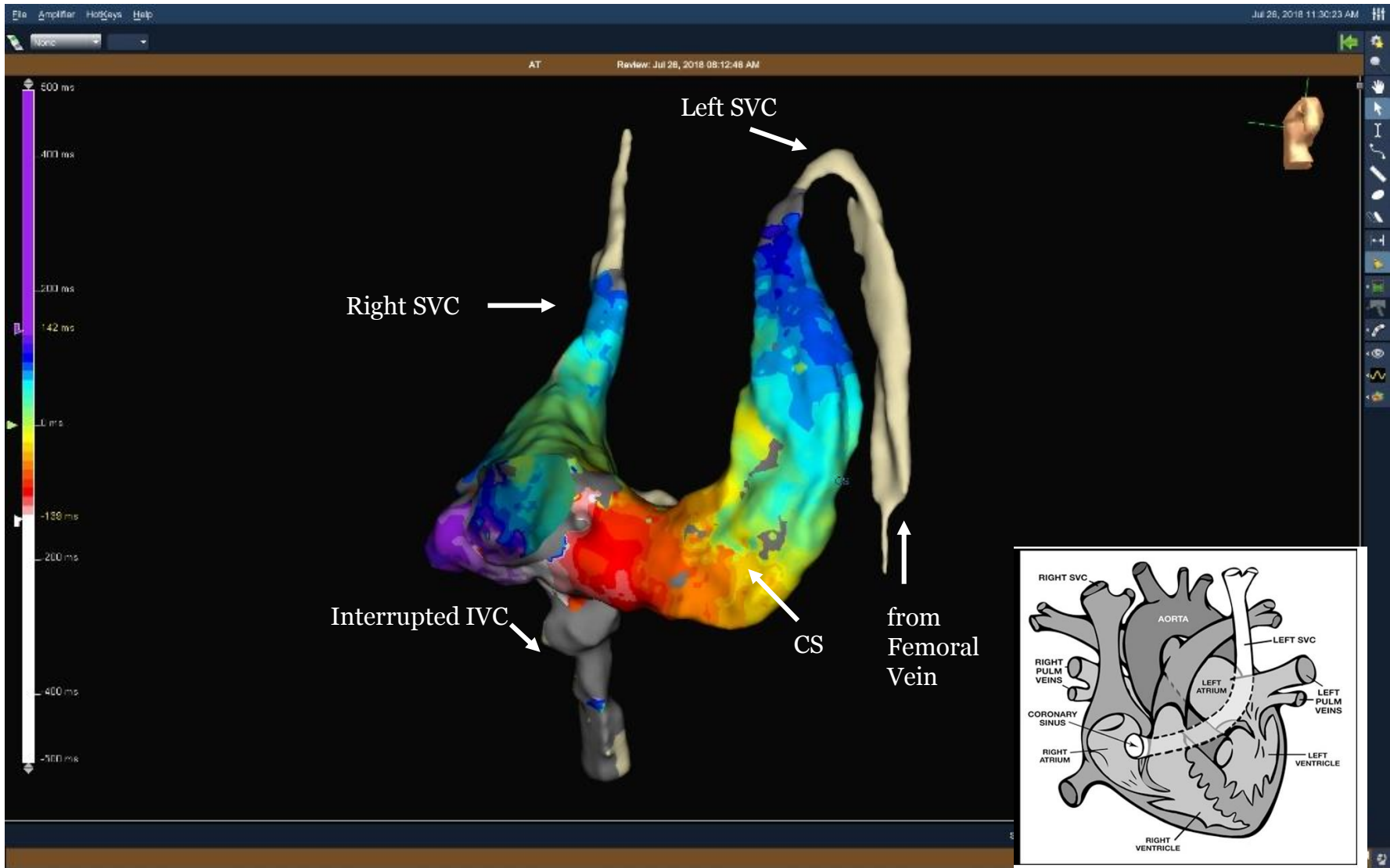
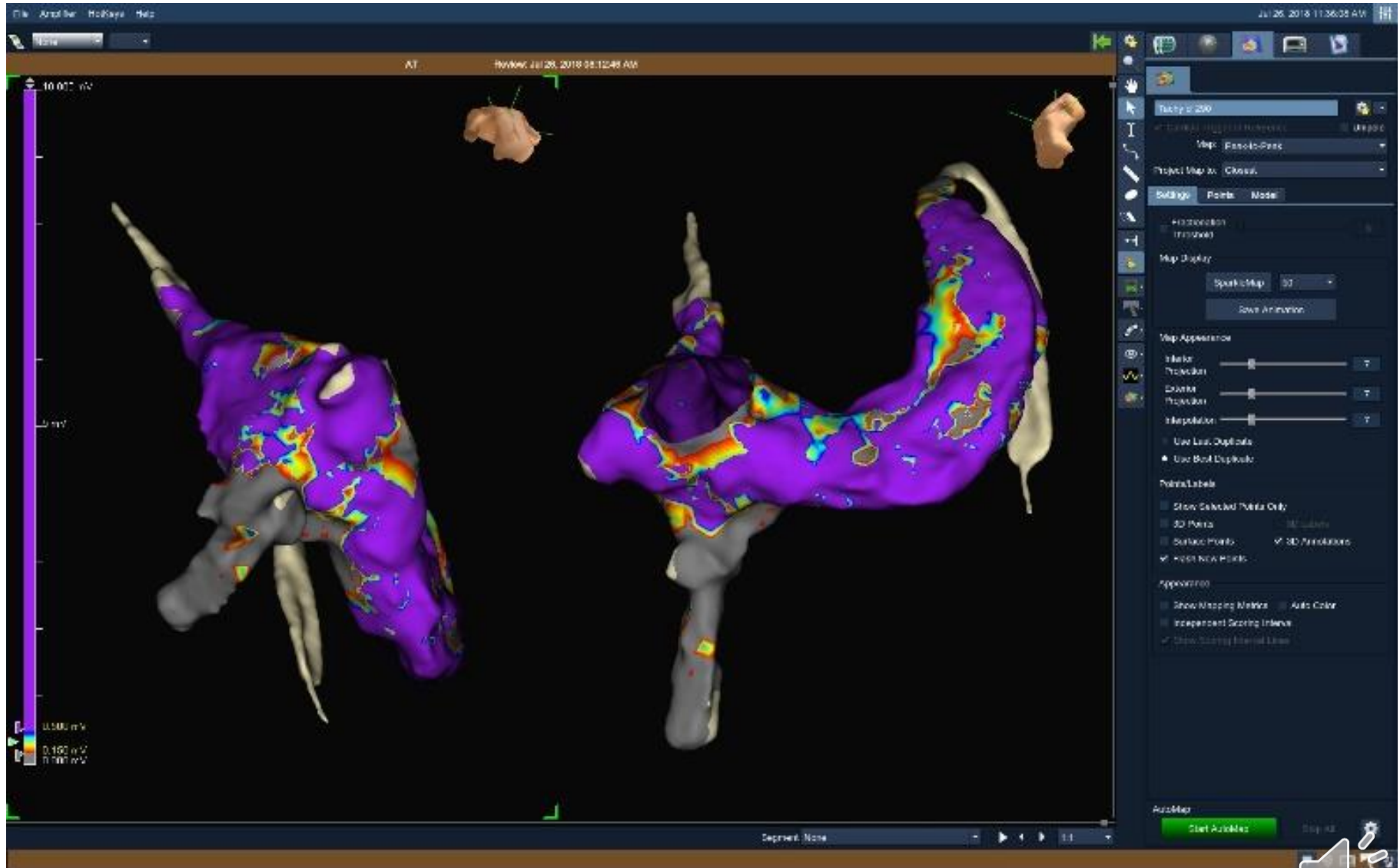


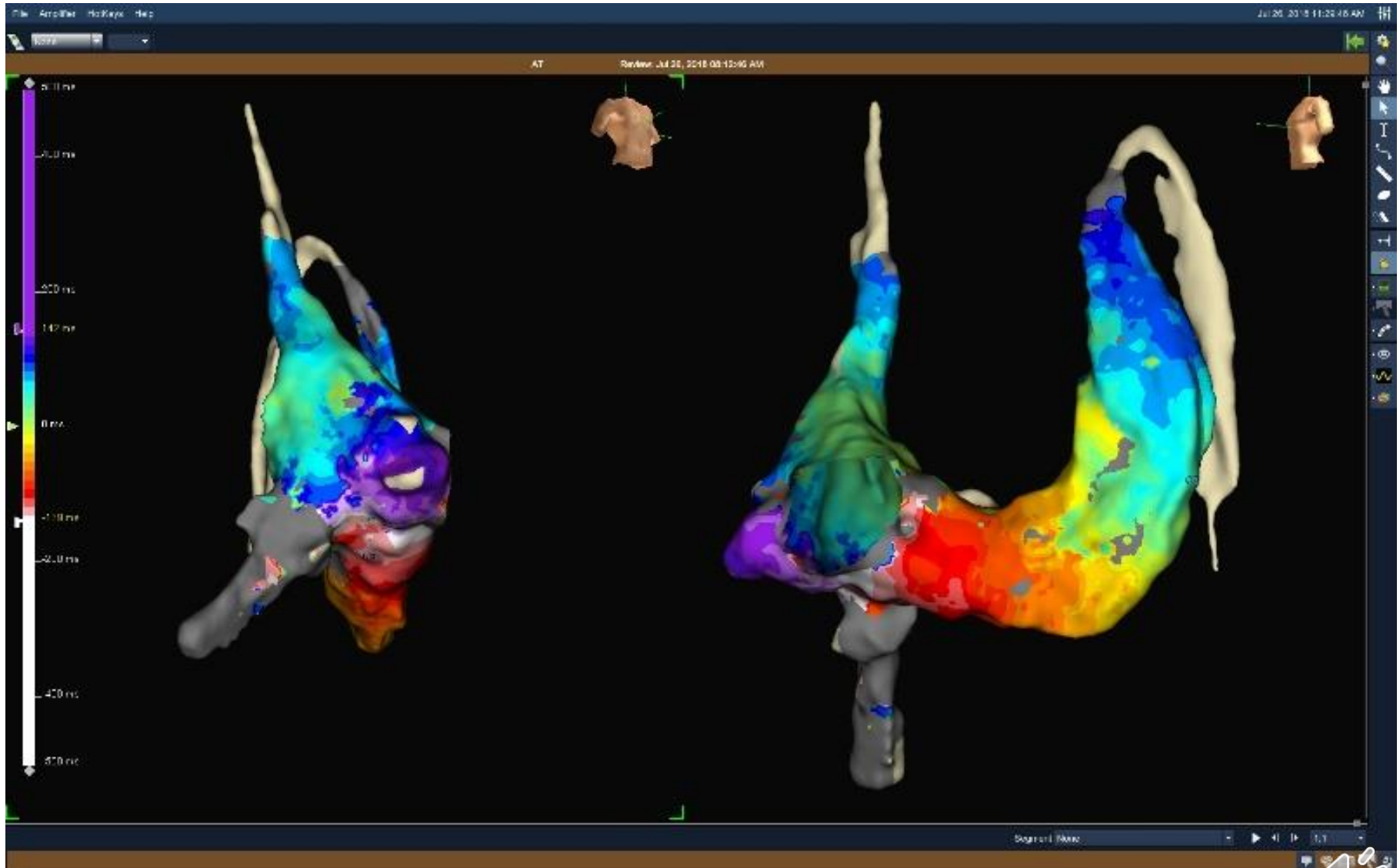
Image from: <http://anesthesiology.pubs.asahq.org/article.aspx?articleid=2504730>



Voltage Map



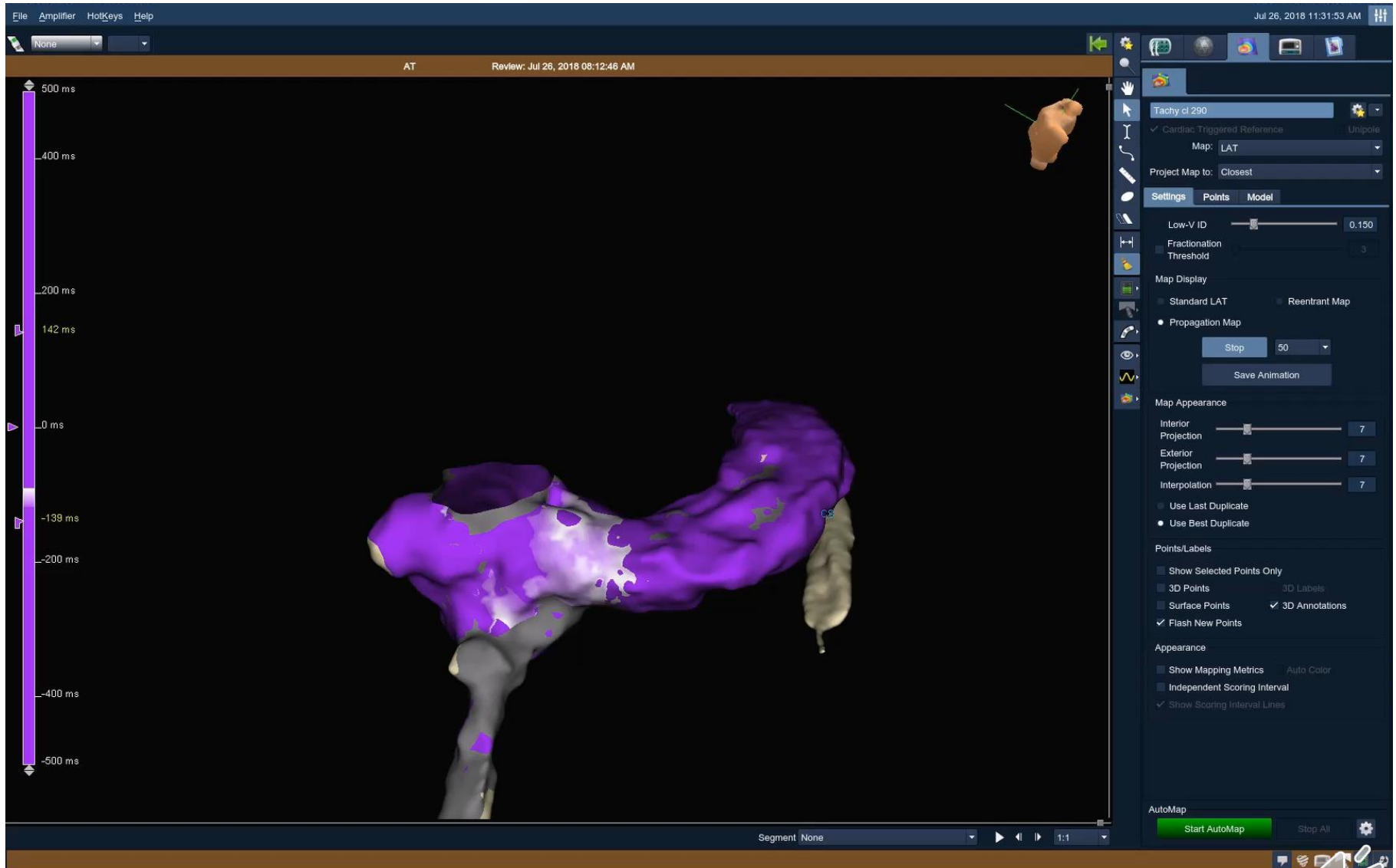
Map



Counterclockwise flutter 290ms Re-entrant Map



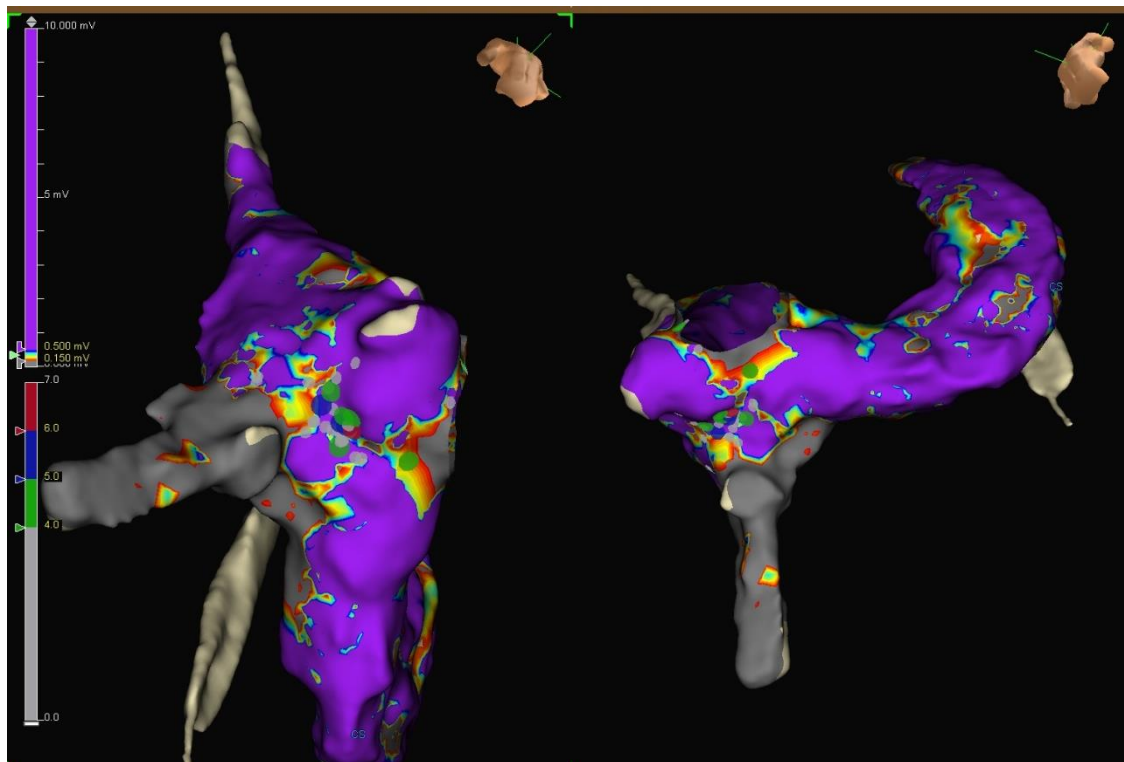
Map

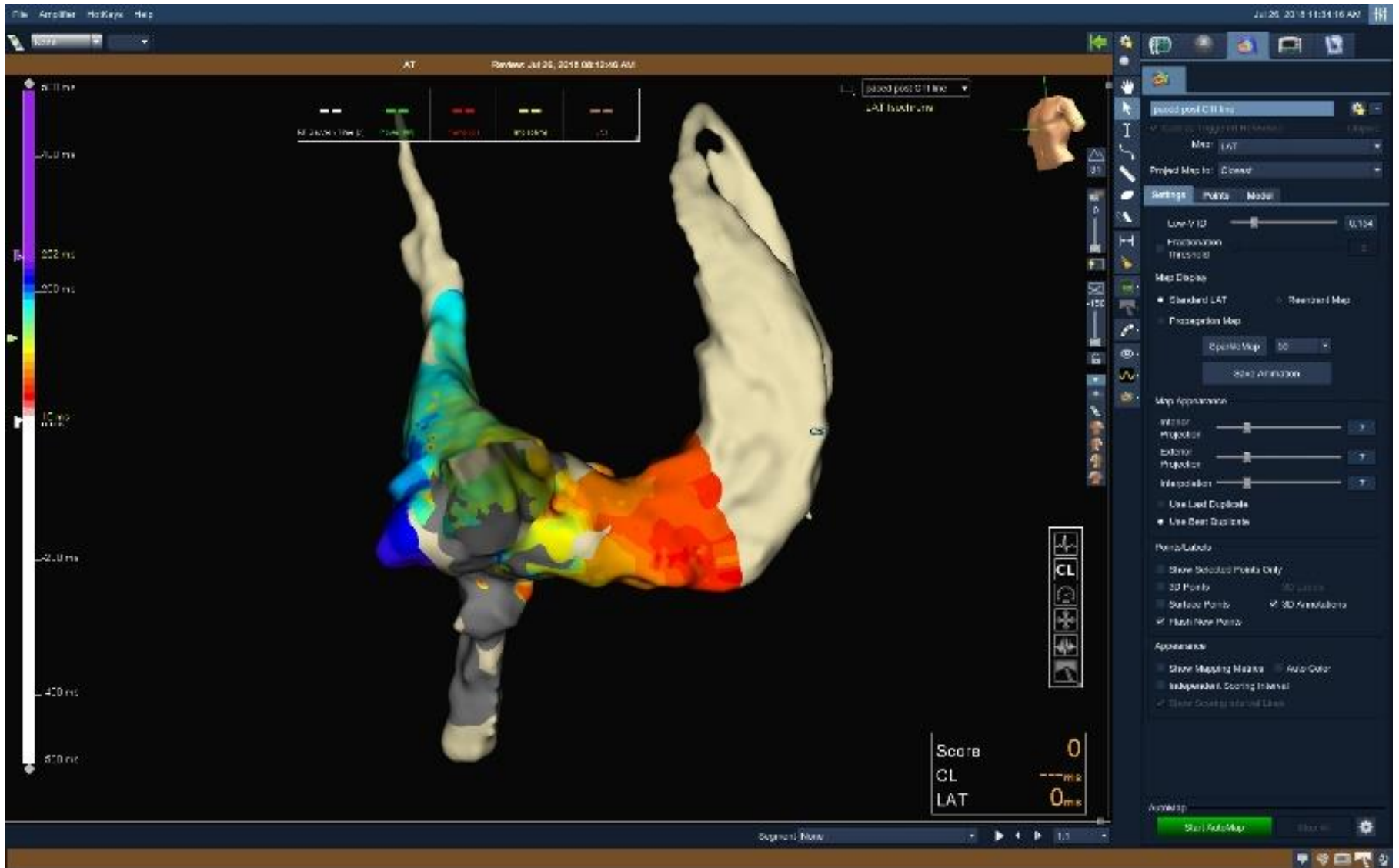


Propagation map

Therapy

- Ablation was performed with Tacticath SE DF from R Internal Jugular vein.
- Ampere settings: 35W 30Flow 48D
- Automark metrics:
- LSI 4,5,6 lesion size 5mm unless below 4 LSI, 3mm





CS paced map post ablation to prove block

Conclusions

- Demonstrates the utility of the HD Grid mapping catheter to map a common arrhythmia in in complex anatomy
- Keys to successful ablation in complex atrial substrates
 1. Be prepared for surprises
 2. Detailed substrate map
 3. Accurate activation map
 4. Traditional EP techniques
 - Entrainment mapping
 5. Effective, durable ablation lesions





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