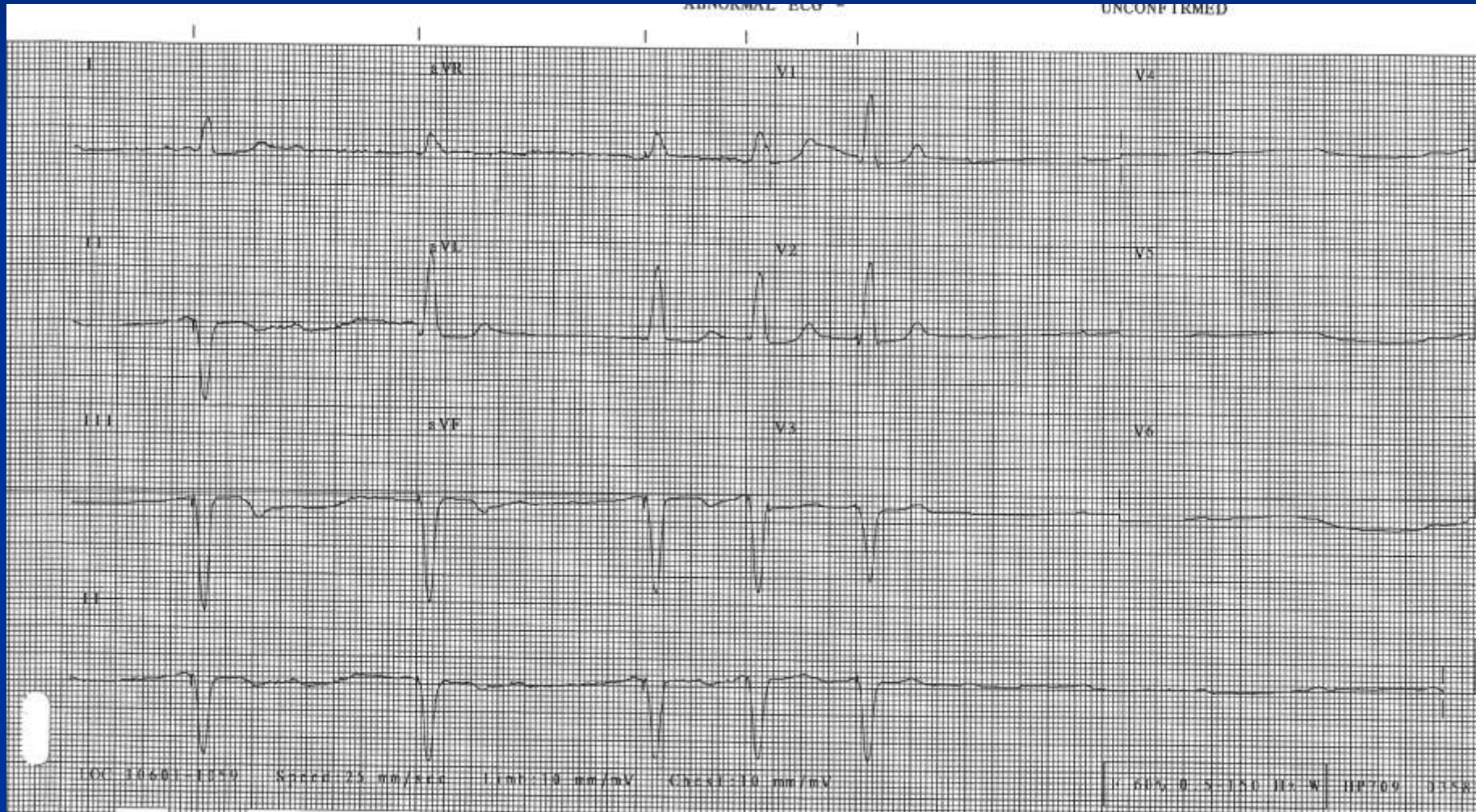


# ICD Case Studies

# 63 year old with dual chamber ICD presents with recurrent ICD discharges to ED



# Interrogation

ICD Model: InSync Maximo 730g

Serial Number: PRL106731H

Date of Visit: Mar 26, 2008

## Quick Look

### Patient, ICD and Lead Information

|            |            |                        |            |  |                     |
|------------|------------|------------------------|------------|--|---------------------|
| Physician: | [REDACTED] |                        |            |  | Phone: 757-395-5300 |
| ICD        | Medtronic  | InSync Maximo 730g     | PRL106731H |  |                     |
| Atrial     | Medtronic  | 5075 CapSureFix® Novus | PJN505326V |  | Nov 11, 2004        |
| R/SVC      | Medtronic  | 6949                   | LFJ019691V |  | Nov 11, 2004        |
| LV         | Medtronic  | 4194                   | LFG007788V |  | Nov 11, 2004        |

### ICD Status

|  |            |              |
|--|------------|--------------|
| Battery Voltage (ERL)=2.62 V on Mar 25, 2008 | 2.62 V ERL | Mar 26, 2008 |
| Last Full Energy Charge                      | 9.13 sec   | Nov 13, 2007 |
| Last Capacitor Formation (interval=Auto)     |            | Nov 13, 2007 |

| Lead Performance         | Atrial   | R/SVC     | LV       |              |
|--------------------------|----------|-----------|----------|--------------|
| EGM Amplitude            | 2.5 mV   | Not Taken |          | Mar 26, 2008 |
| Pacing Impedance         | 504 ohms | 928 ohms  | 775 ohms | Mar 26, 2008 |
| Defibrillation Impedance |          | 42 ohms   |          | Mar 26, 2008 |
| SVC Impedance            | 50 ohms  |           |          | Mar 26, 2008 |

### Parameter Summary

| Type | Detection | Rx1      | Rx2  | Rx3  | Rx4  | Rx5  | Rx6  |
|------|-----------|----------|------|------|------|------|------|
| VF   | On        | 25 J     | 35 J | 35 J | 35 J | 35 J | 35 J |
| FVT  | Off       | Burst(2) | 25 J | 35 J | 35 J | 35 J | 35 J |
| VT   | On        |          |      |      |      |      |      |



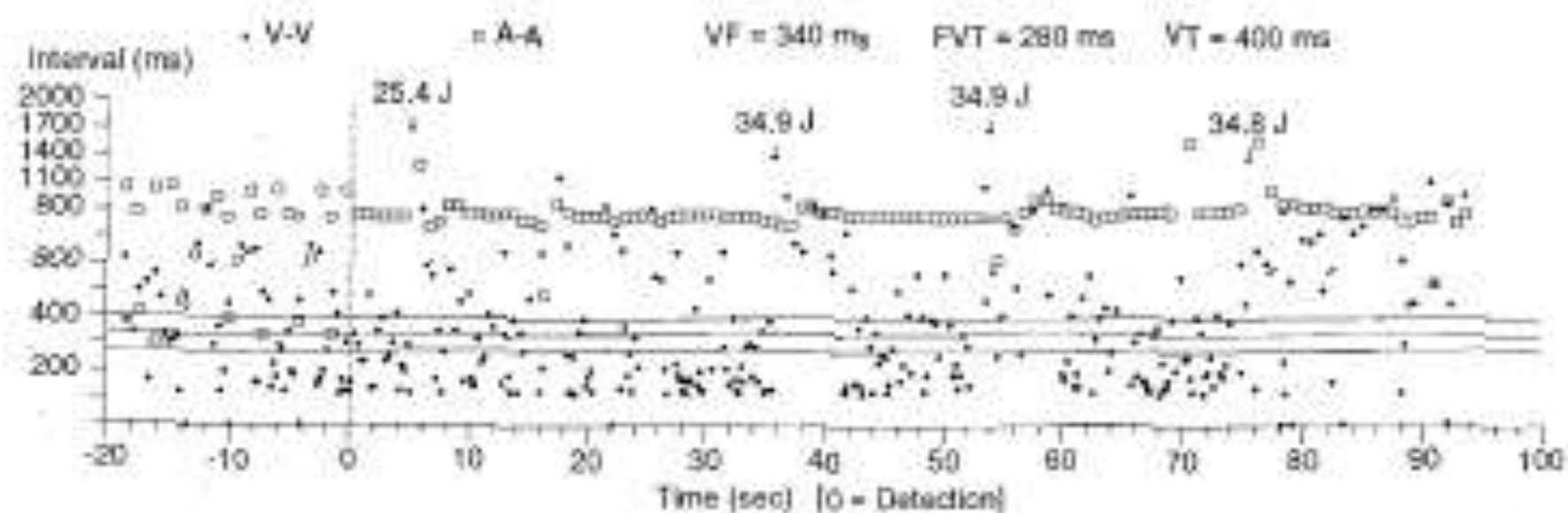
Clinical Status: Since Oct 24, 2007

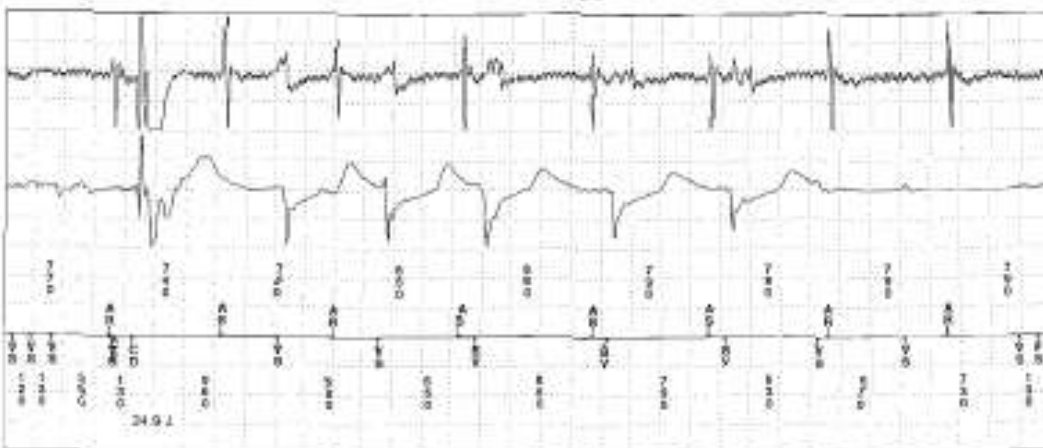
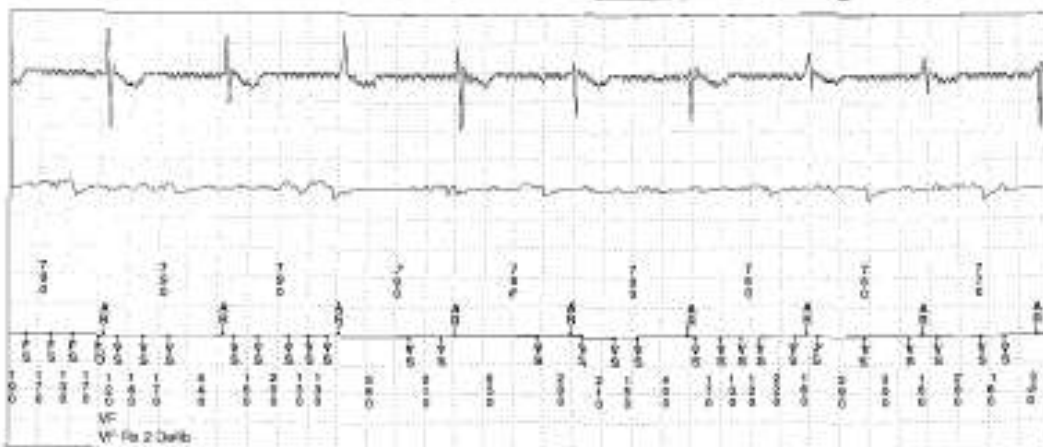
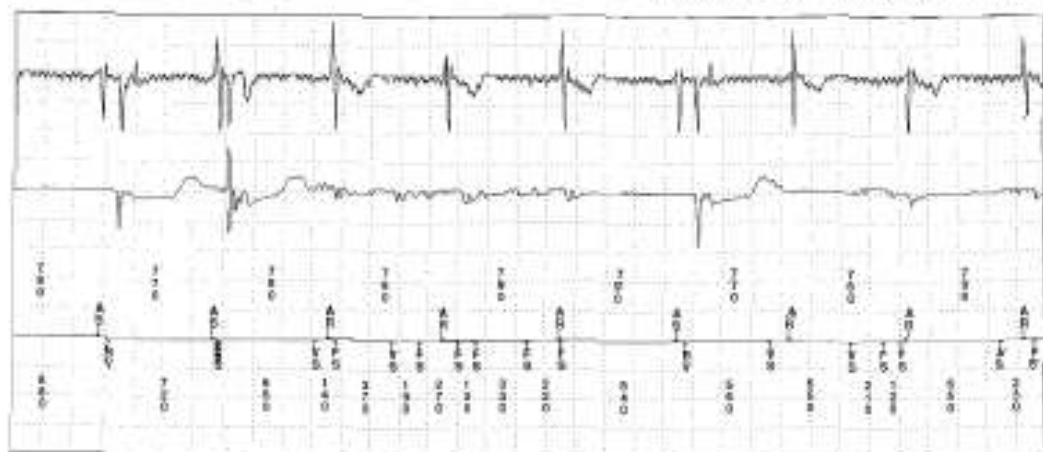
| Episodes       |     | Pacing |        |
|----------------|-----|--------|--------|
| VF             | 28  | AS-VS  | <0.1 % |
| FVT            | 0   | AS-VP  | 92.8 % |
| VT             | 0   | AP-VS  | <0.1 % |
| SVT            | 0   | AP-VP  | 7.2 %  |
| NST and Others | 520 |        |        |
| Mode Switch    | 1   |        |        |

Observations (11)

- Battery voltage is <= 2.62 V. ERL Replacement of the ICD is recommended.
- 5888 V-V intervals have been sensed at 120 or 130ms since Mar 25, 2008 14:58:55. Check for sensing issues (e.g. double counting of R-waves, lead fracture, loose set screw).
- Patient Alert triggered - VF detection Off, three or more VF therapies Off.
- 2 VF episodes indicate last therapy was not successful. Most recent was Episode #28, Mar 25, 2008 03:42:55.
- 13 VF episodes indicate more than one therapy was attempted. Most recent was Episode #29, Mar 26, 2008 03:46:39.
- 19 VF episodes were longer than 30 seconds. Most recent was Episode #29, Mar 26, 2008 03:46:39.
- Longest ventricular sensing episode Since Last Session is greater than 60 seconds.

| ID# | Date/Time       | Type | V. Cycle | Last Rx | Success | Duration |
|-----|-----------------|------|----------|---------|---------|----------|
| 29  | Mar 26 03:48:39 | VF   | 180 ms   | VF Rx 4 | Yes     | 1.4 min  |





- What is the problem?
- How do you manage this?

# Upgrade of Separate ICD and Dual Chamber pacemakers to combined BiV ICD

- Explanted ICD from abdominal site
- Removed ventricular pace sensed lead from pacemaker from Right side
- Implanted New RV ICD lead and LV lead retaining old atrial lead from explanted dual chamber pacemaker on right side
- DFTs performed and unable to convert at 41J delivered
  - Now what?



