MIT-BIH Arrhythmia Database Directory

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Records in the MIT-BIH Arrhythmia Database

This section contains notes and statistics that describe the contents of each record. The leads used for the upper and lower signals are given for each record immediately following the record number. Beat counts are given for the first five minutes of each record and the remainder of the record (the EC38-defined ``learning'' and ``test'' periods, respectively). Note that the totals include two types of non-beats (blocked APCs and ventricular flutter waves) for those few records in which they occur. The total duration of each record is 30 minutes and 5.556 seconds; durations noted below are rounded to the nearest second, and may not sum to exactly 30:06 because of accumulated rounding error. Heart rates are given in beats per minute measured over 3 R-R intervals.

Following the statistical summary and notes for each record are links to points of interest in each case. You may follow these links to view the signals and annotations using **WAVE**. To do so successfully, you must have configured your browser to use `wavescript` as a helper application, as described in *WAVE and the Web* (in the *WAVE User's Guide*).

Follow the links in this table to go directly to any record:

100 104 108 113 117 122 201 207 212 217 222 231
101 105 109 114 118 123 202 208 213 219 223 232
102 106 111 115 119 124 203 209 214 220 228 233
103 107 112 116 121 200 205 210 215 221 230 234

Record 100 (MLII, V5; male, age 69)

Medications: Aldomet, Inderal

Beats	Before 5:00	After 5:00	Total
Normal	367	1872	2239
APC	4	29	33
PVC	-	1	1
Total	371	1902	2273

Supraventricular ectopy

- 33 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	70-89	1	30:06

Signal quality	Episodes	Duration

Both clean	1	30:06

Points of interest:

11:03 Normal sinus rhythm
25:13 PVC
26:09 APCs
27:55 Normal sinus rhythm

Record 101 (MLII, V1; female, age 75)

Medications: Diapres

Beats	Before 5:00	After 5:00	Total
Normal	342	1518	1860
APC	-	3	3
Unclassifiable	-	2	2
Total	342	1523	1865

Supraventricular ectopy

- 3 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	55-79	1	30:06

Signal quality	Episodes	Duration
Both clean	3	30:01
Upper noisy	1	0:04
Unreadable	1	0:01

Points of interest:

1:34 Normal sinus rhythm
1:48 Noise
5:13 Noise/artifact
9:54 APC
24:32 APC

Record 102 (V5, V2; female, age 84)

Medications: Digoxin

Beats	Before 5:00	After 5:00	Total
Normal	98	1	99

PVC	1	3	4
Paced	243	1785	2028
Pacemaker fusion	24	32	56
Total	366	1821	2187

Ventricular ectopy

- 4 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	72-78	2	1:22
Paced rhythm	68-78	3	28:44

Signal quality	Episodes	Duration
Both clean	1	30:06

Notes:
The rhythm is paced with a demand pacemaker. The PVCs are multiform.

Points of interest:

0:55 Paced rhythm
1:12 Transition from paced to normal sinus rhythm
1:28 PVC
2:30 Normal sinus rhythm
4:51 Pacemaker fusion beats
9:35 PVC
16:12 Paced rhythm

Record 103 (MLII, V2; male, age not recorded)

Medications: Diapres, Xyloprim

Beats	Before 5:00	After 5:00	Total
Normal	355	1727	2082
APC	-	2	2
Total	355	1729	2084

Supraventricular ectopy

- 2 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	62-92	1	30:06

Signal quality	Episodes	Duration
Both clean	4	22:01

Upper noisy	1	0:09
Lower noisy	2	7:56

Points of interest:

1:09 Normal sinus rhythm
17:21 Normal sinus rhythm
19:15 APC, noise in lower signal
22:13 Noise in lower signal
23:33 Noise in lower signal
28:58 Noise in lower signal

Record 104 (V5, V2; female, age 66)

Medications: Digoxin, Pronestyl

Beats	Before 5:00	After 5:00	Total
Normal	65	98	163
PVC	1	1	2
Paced	197	1183	1380
Pacemaker fusion	104	562	666
Unclassifiable	5	13	18
Total	372	1857	2229

Ventricular ectopy

- 2 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	69-82	22	3:52
Paced rhythm	70-78	23	26:13

Signal quality	Episodes	Duration
Both clean	13	26:46
Upper noisy	5	0:24
Lower noisy	8	0:46
Both noisy	12	2:09

Notes:

The rate of paced rhythm is close to that of the underlying sinus rhythm, resulting in many pacemaker fusion beats. The PVCs are multiform. Several bursts of muscle noise occur, but the signals are generally of good quality.

Points of interest:

3:42 PVC

5:13 Noise
5:52 Transition from paced to normal sinus rhythm
6:17 Noise
8:22 Noise in lower signal
26:51 Paced, normal, and pacemaker fusion beats
29:10 Paced, normal, and pacemaker fusion beats

Record 105 (MLII, V1; female, age 73)

Medications: Digoxin, Nitropaste, Pronestyl

Beats	Before 5:00	After 5:00	Total
Normal	405	2121	2526
PVC	12	29	41
Unclassifiable	-	5	5
Total	417	2155	2572

Ventricular ectopy

- 41 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	78-102	1	30:06

Signal quality	Episodes	Duration
Both clean	31	22:18
Upper noisy	3	0:10
Lower noisy	28	3:27
Both noisy	23	4:06
Unreadable	4	0:04

Notes:
The PVCs are uniform. The predominant feature of this tape is high-grade noise and artifact.

Points of interest:

5:27 Artifact
7:57 PVC
15:16 Normal sinus rhythm
17:52 Artifacts
22:02 Noise
26:45 PVC
27:27 Noise
28:08 Noise
29:07 Noise

Record 106 (MLII, V1; female, age 24)

Medications: Inderal

Beats	Before 5:00	After 5:00	Total
Normal	271	1236	1507
PVC	60	460	520
Total	331	1696	2027

Ventricular ectopy

- 327 isolated beats
- 95 couplets
- 1 run of 3 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	49-87	21	22:36
Ventricular bigeminy	55-103	18	7:15
Ventricular trigeminy	57-90	1	0:13
Ventricular tachycardia	121	1	0:02

Signal quality	Episodes	Duration
Both clean	15	16:25
Lower noisy	15	13:41

Notes:
The PVCs are multiform.

Points of interest:

0:19 Normal sinus rhythm, noise in lower signal
1:37 Ventricular couplets
2:53 Ventricular tachycardia, 3 beats
4:23 PVC
7:57 Noise in lower signal
10:52 Noise in lower signal
12:27 Ventricular bigeminy (two types)
16:17 Multiform PVCs, ventricular couplet
25:13 Ventricular couplet
25:52 Ventricular couplets

Record 107 (MLII, V1; male, age 63)

Medications: Digoxin

Beats	Before 5:00	After 5:00	Total
PVC	2	57	59

Paced	351	1727	2078
Total	353	1784	2137

Ventricular ectopy

- 59 isolated beats

Rhythm	Rate	Episodes	Duration
Paced rhythm	68-82	1	30:06

Signal quality	Episodes	Duration
Both clean	2	30:04
Lower noisy	1	0:02

Notes:
Complete heart block is present. The PVCs are multiform.

Points of interest:

0:44 Paced rhythm
12:30 PVC
19:54 PVC
20:38 Noise
25:52 PVC

Record 108 (MLII, V1; female, age 87)

Medications: Digoxin, Quinaglute

Beats	Before 5:00	After 5:00	Total
Normal	279	1460	1740
APC	-	4	4
PVC	4	13	17
Fusion PVC	-	2	2
Junctional escape	-	1	1
Blocked APC	2	9	11
Total	285	1489	1774

Supraventricular ectopy

- 4 isolated beats

Ventricular ectopy

- 15 isolated beats
- 2 couplets

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	44-78	1	30:06

Signal quality	Episodes	Duration
Both clean	19	24:05
Upper noisy	3	0:16
Lower noisy	12	2:45
Both noisy	8	3:01

Notes:

There is borderline first degree AV block and sinus arrhythmia. The PVCs are multiform. The lower channel exhibits considerable noise and baseline shifts.

Points of interest:

0:22 PVC, blocked APC, noise
4:51 Interpolated PVC
7:41 Axis shift
8:13 PVC, blocked APC, fusion PVC
10:55 Sinus arrhythmia
18:08 Fusion PVC-PVC couplet
20:05 Junctional escape beat
24:20 Blocked APC, APCs
28:10 Noise
29:00 Noise

Record 109 (MLII, V1; male, age 64)

Medications: Quinidine

Beats	Before 5:00	After 5:00	Total
Left BBB	425	2067	2492
PVC	6	32	38
Fusion PVC	2	-	2
Total	433	2099	2532

Ventricular ectopy

- 40 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	77-101	1	30:06

Signal quality	Episodes	Duration
Both clean	2	29:52
Lower noisy	1	0:14

Notes:

There is first degree AV block. The PVCs are multiform.

Points of interest:

0:13 Fusion PVC
1:28 PVC
3:36 Normal sinus rhythm with left bundle branch block
4:46 PVC
5:27 Noise
14:01 PVC
17:13 PVC
19:21 PVC
26:09 Noise
28:03 PVC
28:28 Normal sinus rhythm with left bundle branch block
29:10 PVC

Record 111 (MLII, V1; female, age 47)

Medications: Digoxin, Lasix

Beats	Before 5:00	After 5:00	Total
Left BBB	348	1775	2123
PVC	-	1	1
Total	348	1776	2124

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	64-82	1	30:06

Signal quality	Episodes	Duration
Both clean	5	29:47
Upper noisy	1	0:07
Lower noisy	3	0:11

Notes:

There is first degree AV block. There are short bursts of both baseline shifts and muscle noise, but in general, the quality is excellent.

Points of interest:

0:25 Normal sinus rhythm, first degree AVB
2:41 Baseline shift noise
3:52 Noise
4:04 Axis shift (in upper signal)
8:31 PVC
11:53 Axis shift
15:41 Noise

19:54 Noise
27:02 Noise

Record 112 (MLII, V1; male, age 54)

Medications: Digoxin, Pronestyl

Beats	Before 5:00	After 5:00	Total
Normal	428	2109	2537
APC	-	2	2
Total	428	2111	2539

Supraventricular ectopy

- 2 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	74-91	1	30:06

Signal quality	Episodes	Duration
Both clean	6	29:11
Upper noisy	2	0:21
Lower noisy	3	0:33

Notes:
There is S-T segment depression in the upper channel.

Points of interest:

11:40 APC
12:30 Axis shift
12:49 APC, noise

Record 113 (MLII, V1; female, age 24)

Medications: None

Beats	Before 5:00	After 5:00	Total
Normal	288	1501	1789
Aberrated APC	1	5	6
Total	289	1506	1795

Supraventricular ectopy

- 6 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	48-87	1	30:06

Signal quality	Episodes	Duration
Both clean	1	30:06

Notes:
The variation in the rate of normal sinus rhythm is possibly due to a wandering atrial pacemaker.

Points of interest:

4:20 Moderate baseline wander
8:22 Aberrated APC
11:48 Sinus arrhythmia with variation in P-wave morphology
12:27 Sinus arrhythmia
22:10 Aberrated APC
29:01 Sinus arrhythmia

Record 114 (V5, MLII; female, age 72)

Medications: Digoxin

Beats	Before 5:00	After 5:00	Total
Normal	261	1559	1820
APC	-	10	10
Junctional premature	1	1	2
PVC	13	30	43
Fusion PVC	-	4	4
Total	275	1604	1879

Supraventricular ectopy

- 7 isolated beats
- 1 run of 5 beats

Ventricular ectopy

- 45 isolated beats
- 1 couplet

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	51-82	2	30:01
SVTA	102-122	1	0:05

Signal quality	Episodes	Duration
Both clean	4	29:18
Upper noisy	4	0:47

Notes:

The PVCs are uniform.

Points of interest:

0:00 Normal sinus rhythm
1:20 PVC
3:39 PVC
3:56 Late-cycle PVC
4:35 Late-cycle PVC
5:36 Ventricular couplet
8:31 PVCs
9:26 PVC, muscle noise
11:37 SVTA, PVC, junctional premature beat
20:02 Noise
29:29 Baseline artifact

Record 115 (MLII, V1; female, age 39)

Medications: None

Beats	Before 5:00	After 5:00	Total
Normal	316	1637	1953
Total	316	1637	1953

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	50-84	1	30:06

Signal quality	Episodes	Duration
Both clean	2	29:56
Lower noisy	1	0:09

Points of interest:

0:55 Normal sinus rhythm
3:22 Sinus arrhythmia
15:52 Baseline wander in lower signal
21:28 Noise in lower signal
27:05 Artifacts in lower signal
28:42 Normal sinus rhythm

Record 116 (MLII, V1; male, age 68)

Medications: None

Beats	Before 5:00	After 5:00	Total

Normal	384	1918	2302
APC	-	1	1
PVC	11	98	109
Total	395	2017	2412

Ventricular ectopy

- 105 isolated beats
- 2 couplets

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	74-86	1	30:06

Signal quality	Episodes	Duration
Both clean	5	29:41
Upper noisy	4	0:25

Notes:
There are two PVC forms.

Points of interest:

0:44 Normal sinus rhythm
1:31 PVCs
10:00 Ventricular couplet
12:32 PVC
16:37 Noise, saturation in upper signal
23:08 Noise, saturation in upper signal
25:47 Ventricular couplet

Record 117 (MLII, V2; male, age 69)

Medications: None

Beats	Before 5:00	After 5:00	Total
Normal	251	1283	1534
APC	-	1	1
Total	251	1284	1535

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	48-66	1	30:06

Signal quality	Episodes	Duration
Both clean	2	29:55
Upper noisy	1	0:01
Both noisy	1	0:09

Points of interest:

3:56 Normal sinus rhythm
11:58 Noise, APC
22:27 Normal sinus rhythm

Record 118 (MLII, V1; male, age 69)

Medications: Digoxin, Norpace

Beats	Before 5:00	After 5:00	Total
Right BBB	349	1817	2166
APC	10	86	96
PVC	3	13	16
Blocked APC	3	7	10
Total	365	1923	2288

Supraventricular ectopy

- 94 isolated beats
- 1 couplet

Ventricular ectopy

- 16 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	54-91	1	30:06

Signal quality	Episodes	Duration
Both clean	7	29:32
Upper noisy	2	0:07
Lower noisy	2	0:10
Both noisy	2	0:18

Notes:
The PVCs are multiform.

Points of interest:

3:39 PVC
8:31 Noise
9:23 PVC
13:47 Blocked APC
22:32 APC, blocked APC, PVC
23:25 APCs
25:41 PVC, APC

26:23 PVCs
26:48 Noise
28:58 Atrial couplet
29:53 APCs

Record 119 (MLII, V1; female, age 51)

Medications: Pronestyl

Beats	Before 5:00	After 5:00	Total
Normal	246	1297	1543
PVC	80	364	444
Total	326	1661	1987

Ventricular ectopy

- 444 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	61-84	49	22:36
Ventricular bigeminy	52-91	37	3:55
Ventricular trigeminy	56-77	17	3:34

Signal quality	Episodes	Duration
Both clean	3	29:35
Lower noisy	2	0:30

Notes:
The PVCs are uniform.

Points of interest:

1:55 PVC
2:38 Ventricular trigeminy
4:51 Ventricular bigeminy
8:42 Normal sinus rhythm
20:05 Noise
25:33 Noise

Record 121 (MLII, V1; female, age 83)

Medications: Digoxin, Isordil, Nitropaste

Beats	Before 5:00	After 5:00	Total
Normal	303	1558	1861
APC	-	1	1

PVC	-	1	1
Total	303	1560	1863

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	55-83	1	30:06

Signal quality	Episodes	Duration
Both clean	6	29:09
Upper noisy	3	0:16
Lower noisy	3	0:39
Both noisy	1	0:01

Points of interest:

1:06 Normal sinus rhythm
3:33 Noise in lower signal
16:48 APC, PVC
24:32 Noise
26:01 Noise

Record 122 (MLII, V1; male, age 51)

Medications: Digoxin, Lasix, Pronestyl

Beats	Before 5:00	After 5:00	Total
Normal	422	2054	2476
Total	422	2054	2476

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	67-97	1	30:06

Signal quality	Episodes	Duration
Both clean	1	30:06

Notes:
The lower channel has low-amplitude high-frequency noise throughout.

Points of interest:

1:09 Noise in lower signal
13:47 Normal sinus rhythm
28:25 Normal sinus rhythm

Record 123 (MLII, V5; female, age 63)

Medications: Digoxin, Inderal

Beats	Before 5:00	After 5:00	Total
Normal	249	1266	1515
PVC	-	3	3
Total	249	1269	1518

Ventricular ectopy

- 3 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	41-65	1	30:06

Signal quality	Episodes	Duration
Both clean	1	30:06

Notes:
The PVCs are uniform and interpolated.

Points of interest:

22:10 Sinus arrhythmia
25:11 Interpolated PVC
27:41 Interpolated PVC
28:36 Sinus arrhythmia

Record 124 (MLII, V4; male, age 77)

Medications: Digoxin, Isordil, Quinidine

Beats	Before 5:00	After 5:00	Total
Right BBB	238	1293	1531
APC	-	2	2
Junctional premature	14	15	29
PVC	-	47	47
Fusion PVC	-	5	5
Junctional escape	-	5	5
Total	252	1367	1619

Supraventricular ectopy

- 2 isolated beats
- 1 run of 3 beats
- 2 runs of 6 beats
- 1 run of 14 beats

Ventricular ectopy

- 18 isolated beats
- 1 run of 6 beats
- 1 run of 8 beats
- 1 run of 20 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	47-64	6	28:36
Nodal (junctional) rhythm	56-64	2	0:30
Ventricular trigeminy	51-59	2	0:22
Idioventricular rhythm	53-61	3	0:37

Signal quality	Episodes	Duration
Both clean	2	29:53
Lower noisy	1	0:13

Notes:

The PVCs are multiform. The junctional escape beats follow PVCs.

Points of interest:

4:43 Accelerated junctional rhythm
5:09 Accelerated idioventricular rhythm, 20 beats
5:21 Accelerated idioventricular rhythm (continued from previous strip)
9:05 Noise in lower signal
10:27 Accelerated idioventricular rhythm
17:38 Accelerated idioventricular rhythm
20:13 APC
23:22 Ventricular trigeminy
26:03 PVC
27:41 PVC, junctional escape beats

Record 200 (MLII, V1; male, age 64)

Medications: Digoxin, Quinidine

Beats	Before 5:00	After 5:00	Total
Normal	305	1438	1743
APC	2	28	30
PVC	126	700	826
Fusion PVC	-	2	2
Total	433	2168	2601

Supraventricular ectopy

- 28 isolated beats

- 1 couplet

Ventricular ectopy

- 721 isolated beats
- 42 couplets
- 5 runs of 3 beats
- 2 runs of 4 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	69-111	70	15:58
Ventricular bigeminy	60-108	71	13:52
Ventricular tachycardia	90-141	7	0:15

Signal quality	Episodes	Duration
Both clean	14	21:44
Upper noisy	6	0:44
Lower noisy	16	6:36
Both noisy	8	1:02

Notes:

The PVCs are multiform. There are occasional bursts of high-frequency noise in the upper channel, and severe noise and artifact in the lower channel.

Points of interest:

1:42 Ventricular tachycardia, 3 beats
5:38 Noise
18:14 Ventricular tachycardia, 4 beats
20:52 Noise
24:49 Ventricular tachycardia, 3 beats
26:12 Ventricular couplets
28:31 Ventricular couplet
29:01 APC, ventricular bigeminy
29:18 APC, PVC
29:51 PVCs

Record 201 (MLII, V1; male, age 68)

Medications: Digoxin, Hydrochlorthiazide, Inderal, KCl

Beats	Before 5:00	After 5:00	Total
Normal	440	1185	1625
APC	-	30	30
Aberrated APC	2	95	97
Junctional premature	-	1	1
PVC	-	198	198

Fusion PVC	-	2	2
Junctional escape	-	10	10
Blocked APC	-	37	37
Total	442	1558	2000

Supraventricular ectopy

- 79 isolated beats
- 23 couplets
- 1 run of 3 beats

Ventricular ectopy

- 200 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	31-61	16	12:57
SVTA	124	1	0:02
Atrial fibrillation	56-149	3	10:06
Nodal (junctional) rhythm	37-60	3	0:24
Ventricular trigeminy	49-56	12	6:37

Signal quality	Episodes	Duration
Both clean	2	30:00
Upper noisy	1	0:02
Lower noisy	1	0:01
Both noisy	1	0:02

Notes:

The PVCs are uniform and late-cycle. Junctional escape beats occur following episodes of ventricular trigeminy.

Points of interest:

0:00 Atrial fibrillation
6:15 Transition from atrial fibrillation to nodal rhythm
7:52 Onset of atrial fibrillation with aberrated beats
8:53 Blocked APCs
18:14 Noise
20:16 PVCs, atrial couplet
22:33 Ventricular trigeminy
23:50 Normal sinus rhythm
24:15 Aberrated atrial couplet, fusion PVC
25:19 Aberrated atrial couplets with right and left bundle branch block
26:20 Supraventricular tachyarrhythmia with aberration, 3 beats
28:03 Atrial fibrillation with aberration

Record 202 (MLII, V1; male, age 68)

Medications: Digoxin, Hydrochlorthiazide, Inderal, KCl

Beats	Before 5:00	After 5:00	Total
Normal	261	1800	2061
APC	-	36	36
Aberrated APC	-	19	19
PVC	4	15	19
Fusion PVC	-	1	1
Total	265	1871	2136

Supraventricular ectopy

- 26 isolated beats
- 13 couplets
- 1 run of 3 beats

Ventricular ectopy

- 20 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	49-69	3	19:31
Atrial flutter	101-143	1	0:48
Atrial fibrillation	60-148	4	9:46

Signal quality	Episodes	Duration
Both clean	1	30:06

Notes:

The PVCs are uniform and late-cycle. This record was taken from the same analog tape as record 201.

Points of interest:

10:16 Normal sinus rhythm, PVCs
12:24 APCs, PVC
12:41 Aberrated APCs, PVC
18:22 Normal sinus rhythm, bradycardia
18:45 Aberrated APCs
18:59 Onset of atrial fibrillation with aberrated beats
21:10 Atrial fibrillation, PVC
21:26 End of atrial fibrillation
22:13 Atrial fibrillation, aberrated beats
25:58 Atrial flutter with 2:1 conduction
27:55 Atrial fibrillation, aberrated beat
29:35 Atrial fibrillation

Record 203 (MLII, V1; male, age 43)

Medications: Coumadin, Digoxin, Heparin, Hygroton, Lasix

Beats	Before 5:00	After 5:00	Total
Normal	426	2103	2529
Aberrated APC	2	-	2
PVC	71	373	444
Fusion PVC	-	1	1
Unclassifiable	-	4	4
Total	499	2481	2980

Supraventricular ectopy

- 2 isolated beats

Ventricular ectopy

- 238 isolated beats
- 64 couplets
- 13 runs of 3 beats
- 6 runs of 4 beats
- 1 run of 7 beats
- 1 run of 9 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	63-173	1	2:43
Atrial flutter	61-180	2	5:14
Atrial fibrillation	54-180	20	21:32
Ventricular trigeminy	100-116	1	0:04
Ventricular tachycardia	124-189	21	0:33

Signal quality	Episodes	Duration
Both clean	21	24:28
Upper noisy	20	3:17
Lower noisy	7	1:49
Both noisy	8	0:30
Unreadable	1	0:02

Notes:

The PVCs are multiform. There are QRS morphology changes in the upper channel due to axis shifts. There is considerable noise in both channels, including muscle artifact and baseline shifts. This is a very difficult record, even for humans!

Points of interest:

5:00 Ventricular tachycardia, 4 beats and 9 beats

13:14 Atrial fibrillation, ventricular couplets
15:02 Noise
22:02 Ventricular couplet, PVCs
23:25 Noise
24:04 PVCs
24:46 Noise
26:39 Ventricular tachycardia, 7 beats
26:51 Ventricular couplet, PVCs
27:15 Ventricular tachycardia, 3 beats

Record 205 (MLII, V1; male, age 59)

Medications: Digoxin, Quinaglute

Beats	Before 5:00	After 5:00	Total
Normal	448	2123	2571
APC	1	2	3
PVC	6	65	71
Fusion PVC	-	11	11
Total	455	2201	2656

Supraventricular ectopy

- 3 isolated beats

Ventricular ectopy

- 33 isolated beats
- 2 runs of 3 beats
- 1 run of 8 beats
- 1 run of 10 beats
- 1 run of 12 beats
- 1 run of 13 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	80-99	7	29:43
Ventricular tachycardia	79-216	6	0:23

Signal quality	Episodes	Duration
Both clean	2	29:43
Lower noisy	1	0:23

Notes:
The PVCs are of two forms, one of which is much more common than the other.

Points of interest:

4:57 Ventricular tachycardia, 8 beats and 10 beats

14:54 Noise in lower signal
15:22 Ventricular tachycardia, 3 beats
16:03 PVC
16:15 Fusion PVCs
19:57 PVC, APC
24:18 Ventricular tachycardia, 12 beats, start of VR, 13 beats
24:30 End of VR, 3-beat VT (continued from previous strip)
27:57 PVCs

Record 207 (MLII, V1; female, age 89)

Medications: Digoxin, Quinaglute

Beats	Before 5:00	After 5:00	Total
Left BBB	81	1376	1457
Right BBB	86	-	86
APC	-	107	107
PVC	101	4	105
Ventricular flutter wave	132	340	472
Ventricular escape	-	105	105
Total	400	1932	2332

Supraventricular ectopy

- 1 isolated beat
- 1 couplet
- 1 run of 104 beats

Ventricular ectopy

- 89 isolated beats
- 5 couplets
- 2 runs of 3 beats
- 1 run of 12 beats
- 1 run of 16 beats
- 1 run of 28 beats
- 1 run of 36 beats
- 1 run of 40 beats
- 1 run of 445 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	57-90	10	22:20
SVTA	108-130	1	0:52
Ventricular bigeminy	49-83	4	2:38
Idioventricular rhythm	29-71	1	1:49
Ventricular tachycardia	118-119	2	0:03
Ventricular flutter	143-358	6	2:24

Signal quality	Episodes	Duration
Both clean	8	28:59
Upper noisy	4	0:22
Lower noisy	3	0:25
Both noisy	1	0:19

Notes:

This is an extremely difficult record. The predominant rhythm is normal sinus with first degree AV block and left bundle branch block. There are periods when the conduction block changes to a right bundle branch block pattern. The PVCs are multiform. Idioventricular rhythm appears following the longest episode of ventricular flutter. The record ends during the episode of SVTA.

Points of interest:

0:00 Ventricular bigeminy with right bundle branch block
0:33 Ventricular couplet, ventricular tachycardia, ventricular flutter
0:45 Ventricular flutter (continued from previous strip)
0:57 Ventricular flutter, VT (continued from previous strip)
1:28 Normal sinus rhythm with first degree AV block
2:07 Ventricular couplet, left and right bundle branch block
2:41 Ventricular bigeminy with right bundle branch block
4:25 Ventricular couplet, ventricular flutter
5:19 Noise
6:56 Noise
17:35 Normal sinus rhythm with first degree AV block
25:36 Ventricular bigeminy with LBBB, ventricular flutter
26:10 Ventricular flutter
27:14 End of ventricular flutter
29:10 Atrial couplet, SVTA (104 beats, to end of record)

Record 208 (MLII, V1; female, age 23)

Medications: None

Beats	Before 5:00	After 5:00	Total
Normal	278	1308	1586
SVPC	-	2	2
PVC	168	824	992
Fusion PVC	72	301	373
Unclassifiable	-	2	2
Total	518	2437	2955

Supraventricular ectopy

- 2 isolated beats

Ventricular ectopy

- 422 isolated beats
- 461 couplets
- 7 runs of 3 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	91-134	27	24:43
Ventricular trigeminy	79-129	26	5:22

Signal quality	Episodes	Duration
Both clean	8	24:46
Lower noisy	8	4:14
Both noisy	8	1:02
Unreadable	1	0:03

Notes:

The PVCs are uniform. The couplets, many of which include a fusion PVC, are often seen in a bigeminal pattern. The triplets each consist of two PVCs and a fusion PVC.

Points of interest:

14:57 Noise/artifact
17:02 Ventricular couplets
19:10 Ventricular trigeminy
21:06 Noise
23:00 Noise
28:08 Ventricular triplet
28:58 Ventricular couplets, isolated PVCs
29:37 Ventricular triplet

Record 209 (MLII, V1; male, age 62)

Medications: Aldomet, Hydrodiuril, Inderal

Beats	Before 5:00	After 5:00	Total
Normal	475	2146	2621
APC	11	372	383
PVC	-	1	1
Total	486	2519	3005

Supraventricular ectopy

- 119 isolated beats
- 2 couplets
- 1 run of 4 beats
- 1 run of 6 beats
- 1 run of 7 beats
- 1 run of 13 beats

- 1 run of 14 beats
- 1 run of 19 beats
- 1 run of 25 beats
- 1 run of 40 beats
- 1 run of 58 beats
- 1 run of 74 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	82-116	11	28:23
SVTA	106-171	10	1:42

Signal quality	Episodes	Duration
Both clean	10	23:21
Lower noisy	10	6:44

Points of interest:

0:47 APC
5:50 Noise
12:57 PVC
14:21 SVTA, 14 beats
23:25 APCs
28:17 Noise, APC
28:33 SVTA, 4 beats, 13 beats
29:10 SVTA, 6 beats

Record 210 (MLII, V1; male, age 89)

Medications: None

Beats	Before 5:00	After 5:00	Total
Normal	413	2010	2423
Aberrated APC	2	20	22
PVC	30	164	194
Fusion PVC	1	9	10
Ventricular escape	-	1	1
Total	446	2204	2650

Supraventricular ectopy

- 20 isolated beats
- 1 couplet

Ventricular ectopy

- 163 isolated beats
- 13 couplets
- 1 run of 4 beats

- 2 runs of 6 beats

Rhythm	Rate	Episodes	Duration
Atrial fibrillation	63-158	9	29:30
Ventricular bigeminy	69-109	5	0:23
Ventricular trigeminy	85-114	1	0:07
Ventricular tachycardia	103-161	2	0:06

Signal quality	Episodes	Duration
Both clean	6	29:16
Upper noisy	3	0:05
Lower noisy	3	0:14
Both noisy	5	0:30
Unreadable	1	0:01

Notes:
The PVCs are multiform.

Points of interest:

3:47 Noise
6:56 Ventricular tachycardia, 6 beats
13:14 Ventricular couplets
15:55 Noise
17:32 Aberrated beat
17:57 Ventricular tachycardia, 6 beats
20:33 PVCs
29:15 PVCs, aberrated beat, ventricular escape beat, fusion PVC

Record 212 (MLII, V1; female, age 32)

Medications: None

Beats	Before 5:00	After 5:00	Total
Normal	129	794	923
Right BBB	334	1491	1825
Total	463	2285	2748

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	63-108	1	30:06

Signal quality	Episodes	Duration
Both clean	7	29:41
Lower noisy	3	0:10
Both noisy	4	0:15

Notes:

There is rate-related right bundle branch block which appears when the heart rate exceeds approximately 90 bpm.

Points of interest:

0:05 Normal sinus rhythm with right bundle branch block
18:42 Noise
24:21 End of RBBB in normal sinus rhythm as heart rate decreases
24:38 Sinus arrhythmia
26:45 Noise
28:46 Start of RBBB in normal sinus rhythm as heart rate increases

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Record 213 (MLII, V1; male, age 61)

Medications: Digoxin

Beats	Before 5:00	After 5:00	Total
Normal	432	2209	2641
APC	1	24	25
Aberrated APC	-	3	3
PVC	25	195	220
Fusion PVC	93	269	362
Total	551	2700	3251

Supraventricular ectopy

- 26 isolated beats
- 1 couplet

Ventricular ectopy

- 560 isolated beats
- 4 couplets
- 3 runs of 3 beats
- 1 run of 5 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	101-113	22	29:01
Ventricular bigeminy	102-116	19	1:00
Ventricular tachycardia	110-117	2	0:04

Signal quality	Episodes	Duration
Both clean	1	30:06

Notes:

The PVCs are multiform and usually late-cycle, frequently resulting in fusion PVCs. The morphology of the fusion PVCs varies from almost normal to almost identical to that of the PVCs.

Points of interest:

3:39 Fusion PVC couplet
14:48 Ventricular tachycardia, 3 beats
15:05 Fusion PVC/PVC couplet
15:38 APC
17:30 Ventricular tachycardia, 4 beats
17:55 PVCs, fusion PVCs, APC
24:43 Fusion PVC, PVCs, aberrated APC
25:58 Aberrated atrial couplet
26:51 Ventricular bigeminy
28:56 Fusion PVCs, PVC

Record 214 (MLII, V1; male, age 53)

Medications: Digoxin, Dilantin

Beats	Before 5:00	After 5:00	Total
Left BBB	339	1664	2003
PVC	44	212	256
Fusion PVC	-	1	1
Unclassifiable	-	2	2
Total	383	1879	2262

Ventricular ectopy

- 233 isolated beats
- 9 couplets
- 2 runs of 3 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	49-92	13	28:53
Ventricular trigeminy	71-87	10	1:08
Ventricular tachycardia	126-150	2	0:05

Signal quality	Episodes	Duration
Both clean	2	29:59
Upper noisy	2	0:02
Both noisy	1	0:04

Notes:

The PVCs are multiform. There are two episodes of artifactual amplitude decrease and one occurrence of tape slippage.

Points of interest:

0:30 Normal sinus rhythm with left bundle branch block, PVC

2:21 Multiform PVCs
2:35 Ventricular couplet
3:25 Artifactual amplitude changes
3:56 Ventricular couplet
5:08 Tape slippage
5:38 Ventricular tachycardia, 3 beats
13:53 Ventricular tachycardia, 3 beats
23:17 Ventricular couplet
27:52 PVC/fusion PVC couplet

Record 215 (MLII, V1; male, age 81)

Medications: None

Beats	Before 5:00	After 5:00	Total
Normal	534	2661	3195
APC	1	2	3
PVC	33	131	164
Fusion PVC	-	1	1
Total	568	2795	3363

Supraventricular ectopy

- 3 isolated beats

Ventricular ectopy

- 120 isolated beats
- 18 couplets
- 3 runs of 3 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	81-124	3	30:03
Ventricular tachycardia	174-177	2	0:02

Signal quality	Episodes	Duration
Both clean	14	29:18
Upper noisy	1	0:00
Lower noisy	14	0:39
Both noisy	2	0:09

Notes:

The PVCs are multiform. There are two very short occurrences of tape slippage (each less than one second in duration).

Points of interest:

2:55 Ventricular tachycardia, 3 beats
3:11 Noise, ventricular couplet
9:46 PVC, APC
15:58 PVC
20:25 Ventricular tachycardia, 3 beats
22:16 Tape slippage
24:57 Ventricular couplet
27:30 Ventricular triplet
27:57 Noise in lower signal
29:42 Tape slippage, ventricular couplet

Record 217 (MLII, V1; male, age 65)

Medications: Digoxin, Lasix, Quinidine

Beats	Before 5:00	After 5:00	Total
Normal	9	235	244
PVC	22	140	162
Paced	301	1241	1542
Pacemaker fusion	31	229	260
Total	363	1845	2208

Ventricular ectopy

- 143 isolated beats
- 8 couplets
- 1 run of 3 beats

Rhythm	Rate	Episodes	Duration
Atrial fibrillation	69-103	24	4:12
Paced rhythm	65-76	33	25:10
Ventricular bigeminy	68-91	9	0:42
Ventricular tachycardia	103	1	0:02

Signal quality	Episodes	Duration
Both clean	3	30:00
Upper noisy	2	0:05

Notes:
The PVCs are multiform.

Points of interest:

0:00 Paced rhythm, pacemaker fusion beat
0:33 PVC
1:23 PVCs, pacemaker fusion beats
4:18 Paced beats, pacemaker fusion beats, normal beats, PVCs

6:12 Ventricular couplet
6:51 Ventricular couplet
7:05 Ventricular tachycardia, 3 beats
12:27 Ventricular bigeminy with paced beats
14:01 Noise
15:30 Atrial fibrillation
16:56 Ventricular couplet
22:27 Atrial fibrillation

Record 219 (MLII, V1; male, age not recorded)

Medications: Digoxin

Beats	Before 5:00	After 5:00	Total
Normal	367	1715	2082
APC	-	7	7
PVC	13	51	64
Fusion PVC	1	-	1
Blocked APC	-	133	133
Total	381	1906	2287

Supraventricular ectopy

- 7 isolated beats

Ventricular ectopy

- 65 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	38-75	8	6:01
Atrial fibrillation	51-103	10	23:47
Ventricular bigeminy	71-88	2	0:08
Ventricular trigeminy	74-94	1	0:10

Signal quality	Episodes	Duration
Both clean	1	30:06

Notes:

Following some conversions from atrial fibrillation to normal sinus rhythm are pauses up to 3 seconds in duration. The PVCs are multiform.

Points of interest:

2:49 Fusion PVC
5:08 APC
5:22 Onset of atrial fibrillation

13:50 End of atrial fibrillation, conversion pause, APC, blocked APC
19:00 End of atrial fibrillation
19:57 Normal sinus rhythm, blocked APCs
22:11 End of atrial fibrillation, conversion pause, blocked APCs
22:43 Blocked APCs
24:43 PVC
26:09 Atrial fibrillation
28:55 Atrial fibrillation, PVCs

Record 220 (MLII, V1; female, age 87)

Medications: Digoxin

Beats	Before 5:00	After 5:00	Total
Normal	353	1601	1954
APC	1	93	94
Total	354	1694	2048

Supraventricular ectopy

- 38 isolated beats
- 13 couplets
- 6 runs of 3 beats
- 3 runs of 4 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	58-74	9	29:50
SVTA	113-150	8	0:16

Signal quality	Episodes	Duration
Both clean	3	29:58
Lower noisy	2	0:08

Points of interest:

6:46 SVTA (3 runs)
10:41 SVTA (2 runs)
18:10 Atrial couplets
20:29 SVTA, atrial couplets
23:58 Noise in lower signal
25:44 Atrial couplet
29:40 APC

Record 221 (MLII, V1; male, age 83)

Medications: Hydrochlorthiazide, Lasix

Beats	Before 5:00	After 5:00	Total
Normal	327	1704	2031
PVC	80	316	396
Total	407	2020	2427

Ventricular ectopy

- 384 isolated beats
- 3 couplets
- 2 runs of 3 beats

Rhythm	Rate	Episodes	Duration
Atrial fibrillation	47-110	12	29:17
Ventricular bigeminy	88-101	1	0:03
Ventricular trigeminy	69-92	8	0:42
Ventricular tachycardia	122-130	2	0:04

Signal quality	Episodes	Duration
Both clean	7	29:48
Upper noisy	1	0:04
Lower noisy	5	0:14

Notes:

The PVCs are multiform, but one form is much more common than the others.

Points of interest:

0:00 Atrial fibrillation, PVCs
2:43 Ventricular couplet
13:00 Ventricular tachycardia, 3 beats
13:56 Ventricular tachycardia, 3 beats
17:49 Ventricular couplet
19:12 PVCs
19:42 Noise
20:44 Ventricular couplet

Record 222 (MLII, V1; female, age 84)

Medications: Digoxin, Quinidine

Beats	Before 5:00	After 5:00	Total
Normal	367	1695	2062
APC	-	208	208
Junctional premature	-	1	1
Junctional escape	-	212	212
Total	367	2116	2483

Supraventricular ectopy

- 147 isolated beats
- 21 couplets
- 4 runs of 3 beats
- 2 runs of 4 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	49-84	32	15:57
Atrial bigeminy	57-98	3	1:28
SVTA	121-148	4	0:08
Atrial flutter	123-148	42	7:03
Atrial fibrillation	69-163	24	1:44
Nodal (junctional) rhythm	47-122	31	3:45

Signal quality	Episodes	Duration
Both clean	8	29:10
Upper noisy	3	0:08
Lower noisy	1	0:05
Both noisy	4	0:42

Notes:

The episodes of paroxysmal atrial flutter/fibrillation are usually followed by nodal escape beats. There are several intervals of high-frequency noise/artifact in both channels.

Points of interest:

6:45 Normal sinus rhythm
17:32 Atrial fibrillation
19:48 Atrial couplet
20:07 Atrial bigeminy
22:32 Paroxysmal atrial flutter, nodal rhythm
24:43 Noise
25:43 End of atrial flutter, nodal rhythm, normal sinus rhythm
26:09 Paroxysmal atrial flutter, nodal rhythm

Record 223 (MLII, V1; male, age 73)

Medications: None

Beats	Before 5:00	After 5:00	Total
Normal	373	1656	2029
APC	7	65	72
Aberrated APC	-	1	1
PVC	18	455	473
Fusion PVC	6	8	14

Atrial escape	2	14	16
Total	406	2199	2605

Supraventricular ectopy

- 57 isolated beats
- 8 couplets

Ventricular ectopy

- 252 isolated beats
- 27 couplets
- 4 runs of 3 beats
- 1 run of 5 beats
- 1 run of 67 beats
- 1 run of 97 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	75-94	11	23:23
Ventricular bigeminy	74-106	7	4:19
Ventricular trigeminy	67-92	3	0:38
Ventricular tachycardia	76-118	7	1:46

Signal quality	Episodes	Duration
Both clean	5	28:41
Lower noisy	5	1:20
Both noisy	1	0:05

Notes:

The PVCs are multiform. The two longest episodes of ventricular tachycardia are slow (100 to 105 bpm) and bidirectional.

Points of interest:

9:35 Bidirectional ventricular tachycardia
12:35 Noise in lower signal
13:39 Atrial couplet
13:51 Ventricular bigeminy
17:21 Bidirectional ventricular tachycardia
17:55 End of ventricular tachycardia
19:07 APC, ventricular couplet, atrial escape beat, aberrated APC
23:58 Ventricular tachycardia, 3 beats
25:47 Ventricular tachycardia, 5 beats
29:16 APCs, atrial escape beat, ventricular couplets
29:51 Multiform ventricular couplets

Record 228 (MLII, V1; female, age 80)

Medications: Digoxin, Norpace

Beats	Before 5:00	After 5:00	Total
Normal	290	1398	1688
APC	-	3	3
PVC	60	302	362
Total	350	1703	2053

Supraventricular ectopy

- 3 isolated beats

Ventricular ectopy

- 360 isolated beats
- 1 couplet

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	54-80	21	24:17
Ventricular bigeminy	50-88	20	5:48

Signal quality	Episodes	Duration
Both clean	11	28:25
Upper noisy	10	1:40

Notes:

There is first degree AV block. The PVCs are multiform. There are three short occurrences of tape slippage with a maximum duration of 2.2 seconds.

Points of interest:

0:19 Ventricular bigeminy
0:38 Artifacts
0:50 PVC, ventricular couplet
4:35 Noise, PVCs
19:18 PVC, APC
20:08 Baseline noise
21:37 Tape slippage
21:49 Tape slippage
26:42 Ventricular bigeminy

Record 230 (MLII, V1; male, age 32)

Medications: Dilantin

Beats	Before 5:00	After 5:00	Total
Normal	397	1858	2255

PVC	-	1	1
Total	397	1859	2256

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	63-99	104	17:45
Pre-excitation (WPW)	59-93	103	12:21

Signal quality	Episodes	Duration
Both clean	2	30:03
Lower noisy	1	0:03

Points of interest:

0:00 Onset of pre-excitation
0:12 End of pre-excitation (continued from previous strip)
5:11 WPW
9:26 Normal sinus rhythm
29:04 PVC

Record 231 (MLII, V1; female, age 72)

Medications: None

Beats	Before 5:00	After 5:00	Total
Normal	12	302	314
Right BBB	278	976	1254
APC	1	-	1
PVC	2	-	2
Blocked APC	2	-	2
Total	295	1278	1573

Ventricular ectopy

- 1 couplet

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	49-69	6	18:26
2° heart block	34-38	5	11:40

Signal quality	Episodes	Duration
Both clean	1	30:06

Notes:

AV conduction is quite abnormal with periods of 2:1 AV block, examples of Mobitz II block, and right bundle branch block which appears to be rate-related. The couplet is probably ventricular.

Points of interest:

0:02 Normal sinus rhythm, Mobitz II block, right bundle branch block
2:24 Blocked APCs, APC, ventricular couplet
20:11 2:1 heart block with right bundle branch block
21:10 Onset of 2:1 heart block
23:22 Transition from 2:1 block with normal conduction to NSR with RBBB

Record 232 (MLII, V1; female, age 76)

Medications: Aldomet, Inderal

Beats	Before 5:00	After 5:00	Total
Right BBB	80	317	397
APC	215	1167	1382
Junctional escape	-	1	1
Total	295	1485	1780

Supraventricular ectopy

- 18 isolated beats
- 82 couplets
- 27 runs of 3 beats
- 32 runs of 4 beats
- 17 runs of 5 beats
- 25 runs of 6 beats
- 13 runs of 7 beats
- 13 runs of 8 beats
- 9 runs of 9 beats
- 15 runs of 10 beats
- 11 runs of 11 beats
- 4 runs of 12 beats
- 4 runs of 13 beats
- 2 runs of 14 beats
- 3 runs of 15 beats
- 1 run of 36 beats

Rhythm	Rate	Episodes	Duration
Sinus bradycardia	24-28	1	30:06

Signal quality	Episodes	Duration
Both clean	14	26:38
Upper noisy	6	1:24
Lower noisy	10	1:14
Both noisy	6	0:49

Notes:

The rhythm is compatible with sick sinus syndrome. There is underlying sinus bradycardia, first degree

AV block, and frequent ectopic atrial runs at rates of 80 to 90 bpm. There are numerous long pauses up to 6 seconds in duration.

Points of interest:

0:58 Noise
1:51 Atrial couplets
11:51 Noise
13:06 Atrial couplets
15:09 Short runs of SVTA
18:17 SVTA, pause
22:31 Pauses
22:47 Pauses
23:20 Pauses
23:34 Pause
23:53 Sinus bradycardia

Record 233 (MLII, V1; male, age 57)

Medications: Dilantin

Beats	Before 5:00	After 5:00	Total
Normal	371	1859	2230
APC	3	4	7
PVC	139	692	831
Fusion PVC	5	6	11
Total	518	2561	3079

Supraventricular ectopy

- 7 isolated beats

Ventricular ectopy

- 704 isolated beats
- 60 couplets
- 6 runs of 3 beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	98-110	36	28:03
Ventricular bigeminy	88-122	28	1:48
Ventricular trigeminy	106-122	1	0:04
Ventricular tachycardia	120-141	6	0:11

Signal quality	Episodes	Duration
Both clean	1	30:06

Notes:

The PVCs are multiform.

Points of interest:

0:11 APCs, PVCs
0:25 Ventricular tachycardia, 3 beats
2:18 Ventricular bigeminy
2:43 Fusion PVC/PVC couplet
3:39 Ventricular couplets
5:02 Transient amplitude decrease on upper signal
9:43 Ventricular tachycardia, 3 beats
16:20 PVCs, ventricular couplet
18:02 PVCs, APC
22:23 Ventricular tachycardia, 2 runs of 3 beats, ventricular couplets

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Record 234 (MLII, V1; female, age 56)

Medications: None

Beats	Before 5:00	After 5:00	Total
Normal	462	2238	2700
Junctional premature	-	50	50
PVC	-	3	3
Total	462	2291	2753

Supraventricular ectopy

- 1 run of 50 beats

Ventricular ectopy

- 3 isolated beats

Rhythm	Rate	Episodes	Duration
Normal sinus rhythm	84-99	2	29:40
SVTA	91-147	1	0:26

Signal quality	Episodes	Duration
Both clean	4	28:40
Lower noisy	4	1:18
Both noisy	1	0:07

Notes:
The PVCs are uniform.

Points of interest:

0:16 Normal sinus rhythm

6:37 Noise
14:01 Onset of junctional tachycardia
14:26 End of junctional tachycardia
17:02 PVC
21:26 PVC
23:17 Noise

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