

HOLTER REPORT

Patient Name: **LEE, SEUNGHYUN**
ID: **73455754**
Age: **6 yr**
Gender: **Male**
Date of Birth:

Hookup Date: **27-Feb-2007**
Hookup Time: **14:33:00**
Duration: **22:40:00**
Recorder Serial #:
Order #:

Overreading Physician: ,
Referring Physician: ,
Ordering Physician: ,
Hook-Up Technician: ,
Analyzing Technician: ,
Indication/Diagnosis:
Medications:

General

121087 QRS complexes
0 Ventricular beats (< 1%)
0 Supraventricular beats (< 1%)
2 % of total time classified as noise

Heart Rates

55 Minimum at 00:59:48 28-Feb
90 Average
186 Maximum at 13:09:15 28-Feb
40587 Beats in tachycardia (≥ 100 bpm), 34% total
290 Beats in bradycardia (≤ 60 bpm), < 1% total
1.24 Seconds Max R-R at 01:49:21 28-Feb

Supraventriculars (S, J, A)

0 Isolated
0 Couplets
0 Bigeminal cycles
0 Runs totaling 0 beats

Ventriculars (V, F, E, I)

0 Isolated
0 Couplets
0 Bigeminal cycles
0 Runs totaling 0 beats

ST Lead 1

-- mm at --
-- mm at --

ST Lead 2

-- mm at --
-- mm at --

ST Channel 3

-- mm at --
-- mm at --

Interpretation

Signed: _____ Date: _____

Hourly Summary												*RR Pause Criteria: 2000				
Heart Rate							Ventricular					Supraventricular				
Hour	Min.s Used	#QRS's	Min.	Ave.	Max.	Pauses	Iso	Cplt	Runs	Max Run	Max Rate	Iso	Cplt	Runs	Max Run	Max Rate
14	26	2592	75	100	148	0	0	0	0	0	0	0	0	0	0	0
15	57	6199	80	108	151	0	0	0	0	0	0	0	0	0	0	0
16	58	5814	71	99	172	0	0	0	0	0	0	0	0	0	0	0
17	58	5994	79	104	141	0	0	0	0	0	0	0	0	0	0	0
18	60	5826	75	97	130	0	0	0	0	0	0	0	0	0	0	0
19	59	5519	70	94	133	0	0	0	0	0	0	0	0	0	0	0
20	59	5966	74	100	133	0	0	0	0	0	0	0	0	0	0	0
21	60	5621	70	94	123	0	0	0	0	0	0	0	0	0	0	0
22	60	5034	60	84	116	0	0	0	0	0	0	0	0	0	0	0
23	60	4462	56	74	127	0	0	0	0	0	0	0	0	0	0	0
00	60	4592	55	77	125	0	0	0	0	0	0	0	0	0	0	0
01	60	4275	55	71	122	0	0	0	0	0	0	0	0	0	0	0
02	60	4401	56	73	124	0	0	0	0	0	0	0	0	0	0	0
03	60	4493	56	75	128	0	0	0	0	0	0	0	0	0	0	0
04	60	4656	58	78	150	0	0	0	0	0	0	0	0	0	0	0
05	58	4978	58	86	131	0	0	0	0	0	0	0	0	0	0	0
06	59	4891	62	83	137	0	0	0	0	0	0	0	0	0	0	0
07	60	4886	64	81	129	0	0	0	0	0	0	0	0	0	0	0
08	60	5028	64	84	150	0	0	0	0	0	0	0	0	0	0	0
09	60	6141	68	103	145	0	0	0	0	0	0	0	0	0	0	0
10	59	6011	80	102	143	0	0	0	0	0	0	0	0	0	0	0
11	58	6199	78	107	152	0	0	0	0	0	0	0	0	0	0	0
12	59	6089	80	103	164	0	0	0	0	0	0	0	0	0	0	0
13	10	1420	84	139	186	0	0	0	0	0	0	0	0	0	0	0
1338		121087	55	90	186	0	0	0	0	0	0	0	0	0	0	0

Analyst Comment

QT Summary Table Lead 1

	Ave RR	Min RR	Max RR	RR=1000ms	Overall
	(682 ms)	(327 ms)	(1000 ms)		
QTp (ms)	283+/-34	359+/-**	320+/-**	320+/-**	283+/-**
QTpc (ms)	343+/-41	628+/-**	320+/-**	***+/-**	***+/-**
QTo (ms)	360+/-32	425+/-**	419+/-**	419+/-**	361+/-**
QToc (ms)	436+/-39	743+/-**	419+/-**	***+/-**	***+/-**
	Shortest QTp	Shortest QTo	Longest QTp	Longest QTo	
	(196 ms)	(265 ms)	(600 ms)	(665 ms)	
RR (ms)	335	348	582	582	
Time	28-Feb 13:09	28-Feb 13:09	28-Feb 11:02	28-Feb 11:02	

QT Summary Table Lead 2

	Ave RR	Min RR	Max RR	RR=1000ms	Overall
	(682 ms)	(327 ms)	(1000 ms)		
QTp (ms)	280+/-35	381+/-**	317+/-**	317+/-**	282+/-**
QTpc (ms)	339+/-43	666+/-**	317+/-**	***+/-**	***+/-**
QTo (ms)	352+/-35	449+/-**	387+/-**	387+/-**	354+/-**
QToc (ms)	426+/-43	785+/-**	387+/-**	***+/-**	***+/-**

	Shortest QTp	Shortest QTo	Longest QTp	Longest QTo
	(178 ms)	(270 ms)	(605 ms)	(669 ms)
RR (ms)	350	350	560	560
Time	27-Feb 16:58	27-Feb 16:58	27-Feb 16:49	27-Feb 16:49

QT Summary Table Lead 3

	Ave RR	Min RR	Max RR	RR=1000ms	Overall
	(682 ms)	(327 ms)	(1000 ms)		
QTp (ms)	291+/-31	383+/-**	336+/-**	336+/-**	290+/-**
QTpc (ms)	352+/-37	670+/-**	336+/-**	***+/-**	***+/-**
QTo (ms)	370+/-26	447+/-**	411+/-**	411+/-**	370+/-**
QToc (ms)	448+/-32	782+/-**	411+/-**	***+/-**	***+/-**

	Shortest QTp	Shortest QTo	Longest QTp	Longest QTo
	(192 ms)	(260 ms)	(614 ms)	(678 ms)
RR (ms)	335	335	560	560
Time	28-Feb 13:09	28-Feb 13:09	27-Feb 16:49	27-Feb 16:49

ST Segment Episode Summary									
Event	Time	Ch.	Duration	Peak ST	Dev*Time	Onset	Peak	Change	
			min	mm	mm*min	BPM	BPM	%	

QT Time Table Lead 1 (27-Feb-2007 14:33 - 28-Feb-2007 13:13)

Time-resolution (one line each): 60 minutes

Time	n	RR	QTp	QTo	QTpc	QToc
27-Feb 14:33-15:00	104	600+/-51	262+/-11	342+/-9	339+/-10	443+/-12
27-Feb 15:00-16:00	237	557+/-50	257+/-39	341+/-36	346+/-53	458+/-51
27-Feb 16:00-17:00	237	613+/-76	262+/-26	346+/-25	336+/-32	444+/-32
27-Feb 17:00-18:00	234	580+/-41	262+/-13	345+/-11	344+/-17	454+/-18
27-Feb 18:00-19:00	240	621+/-51	265+/-9	343+/-7	337+/-8	436+/-13
27-Feb 19:00-20:00	239	644+/-60	270+/-18	347+/-17	337+/-28	433+/-29
27-Feb 20:00-21:00	239	600+/-47	261+/-9	345+/-7	338+/-10	446+/-14
27-Feb 21:00-22:00	240	641+/-41	274+/-6	352+/-6	343+/-9	440+/-12
27-Feb 22:00-23:00	239	717+/-74	293+/-22	368+/-21	346+/-28	436+/-30
27-Feb 23:00-00:00	226	809+/-66	311+/-7	385+/-6	346+/-12	429+/-14
28-Feb 00:00-01:00	240	789+/-60	306+/-9	380+/-10	345+/-10	429+/-12
28-Feb 01:00-02:00	233	848+/-72	321+/-9	398+/-8	349+/-13	433+/-15
28-Feb 02:00-03:00	240	826+/-74	321+/-12	397+/-11	354+/-14	438+/-16
28-Feb 03:00-04:00	240	807+/-67	314+/-7	391+/-8	351+/-13	437+/-17
28-Feb 04:00-05:00	240	783+/-79	307+/-13	381+/-12	348+/-13	432+/-16
28-Feb 05:00-06:00	237	714+/-109	294+/-26	370+/-23	350+/-29	441+/-33
28-Feb 06:00-07:00	240	735+/-87	298+/-34	370+/-33	349+/-46	434+/-48
28-Feb 07:00-08:00	240	739+/-42	293+/-6	365+/-8	341+/-9	425+/-13
28-Feb 08:00-09:00	240	720+/-63	287+/-9	363+/-8	339+/-11	429+/-15
28-Feb 09:00-10:00	239	588+/-59	261+/-10	343+/-8	342+/-12	449+/-16
28-Feb 10:00-11:00	239	593+/-50	258+/-16	342+/-13	336+/-25	445+/-27
28-Feb 11:00-12:00	238	566+/-49	260+/-37	344+/-35	346+/-49	458+/-48
28-Feb 12:00-13:00	239	588+/-67	264+/-24	344+/-23	345+/-36	450+/-36
28-Feb 13:00-13:13	43	442+/-81	228+/-29	305+/-31	345+/-46	462+/-46

QT Time Table Lead 2 (27-Feb-2007 14:33 - 28-Feb-2007 13:13)

Time-resolution (one line each): 60 minutes

Time	n	RR	QTp	QTo	QTpc	QToc
27-Feb 14:33-15:00	104	600+/-51	260+/-13	333+/-12	336+/-13	431+/-18
27-Feb 15:00-16:00	235	556+/-50	254+/-40	330+/-38	341+/-56	443+/-56
27-Feb 16:00-17:00	238	613+/-76	256+/-37	333+/-35	328+/-50	427+/-49
27-Feb 17:00-18:00	235	580+/-42	257+/-24	332+/-25	338+/-31	437+/-33
27-Feb 18:00-19:00	240	621+/-51	262+/-22	337+/-23	333+/-25	428+/-26
27-Feb 19:00-20:00	238	645+/-59	267+/-21	340+/-22	333+/-29	424+/-34
27-Feb 20:00-21:00	239	600+/-47	258+/-18	334+/-19	333+/-24	432+/-25
27-Feb 21:00-22:00	239	641+/-41	272+/-16	347+/-17	341+/-18	433+/-20
27-Feb 22:00-23:00	239	717+/-74	302+/-37	373+/-34	357+/-42	441+/-41
27-Feb 23:00-00:00	226	809+/-66	338+/-14	406+/-13	377+/-19	453+/-21
28-Feb 00:00-01:00	240	789+/-60	322+/-20	391+/-17	363+/-19	441+/-19
28-Feb 01:00-02:00	233	848+/-72	316+/-19	385+/-18	344+/-23	419+/-24
28-Feb 02:00-03:00	240	826+/-74	314+/-20	382+/-18	346+/-22	422+/-23
28-Feb 03:00-04:00	240	807+/-67	302+/-14	371+/-14	337+/-19	414+/-21
28-Feb 04:00-05:00	240	783+/-79	298+/-12	370+/-13	338+/-17	420+/-22
28-Feb 05:00-06:00	235	716+/-108	282+/-17	350+/-16	335+/-22	416+/-30
28-Feb 06:00-07:00	240	735+/-87	288+/-37	356+/-37	338+/-50	418+/-54
28-Feb 07:00-08:00	240	739+/-42	303+/-20	369+/-19	352+/-22	430+/-21
28-Feb 08:00-09:00	240	720+/-63	300+/-20	369+/-20	354+/-22	437+/-25
28-Feb 09:00-10:00	240	588+/-59	261+/-16	334+/-17	341+/-21	436+/-25
28-Feb 10:00-11:00	239	593+/-50	254+/-26	327+/-26	331+/-39	426+/-42
28-Feb 11:00-12:00	236	566+/-50	260+/-34	336+/-34	346+/-46	447+/-47
28-Feb 12:00-13:00	239	588+/-67	265+/-34	340+/-33	347+/-47	445+/-49
28-Feb 13:00-13:13	43	442+/-81	227+/-40	314+/-34	343+/-63	476+/-63

QT Time Table Lead 3 (27-Feb-2007 14:33 - 28-Feb-2007 13:13)

Time-resolution (one line each): 60 minutes

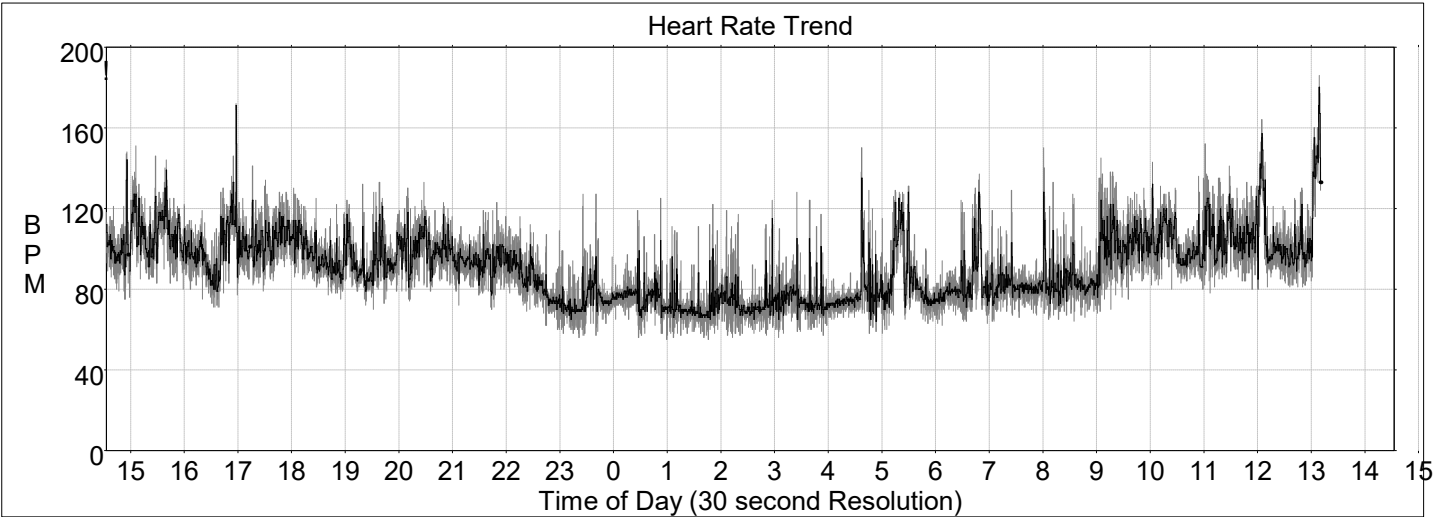
Time	n	RR	QTp	QTo	QTpc	QToc
27-Feb 14:33-15:00	104	600+/-51	252+/-15	348+/-9	326+/-18	450+/-13
27-Feb 15:00-16:00	234	557+/-49	248+/-36	345+/-32	333+/-48	463+/-43
27-Feb 16:00-17:00	238	613+/-76	260+/-37	353+/-34	334+/-47	453+/-44
27-Feb 17:00-18:00	234	580+/-42	264+/-23	353+/-19	347+/-31	464+/-25
27-Feb 18:00-19:00	240	621+/-51	274+/-14	351+/-6	348+/-16	446+/-15
27-Feb 19:00-20:00	237	646+/-59	279+/-13	356+/-10	348+/-17	445+/-18
27-Feb 20:00-21:00	239	600+/-47	272+/-17	353+/-12	352+/-25	457+/-19
27-Feb 21:00-22:00	240	641+/-41	288+/-9	361+/-6	360+/-15	451+/-12
27-Feb 22:00-23:00	240	717+/-74	306+/-29	379+/-28	362+/-38	448+/-39
27-Feb 23:00-00:00	226	809+/-66	322+/-12	394+/-10	358+/-17	439+/-17
28-Feb 00:00-01:00	240	789+/-60	318+/-13	392+/-9	358+/-16	442+/-16
28-Feb 01:00-02:00	233	848+/-72	338+/-7	406+/-7	368+/-15	442+/-18
28-Feb 02:00-03:00	240	826+/-74	337+/-7	405+/-7	372+/-15	447+/-18
28-Feb 03:00-04:00	240	807+/-67	333+/-7	401+/-6	371+/-15	448+/-19
28-Feb 04:00-05:00	240	783+/-79	325+/-12	394+/-11	368+/-15	447+/-18
28-Feb 05:00-06:00	233	718+/-107	311+/-21	384+/-17	369+/-22	456+/-25
28-Feb 06:00-07:00	240	735+/-87	307+/-35	382+/-32	360+/-47	448+/-48
28-Feb 07:00-08:00	240	739+/-42	304+/-7	374+/-6	354+/-11	436+/-12
28-Feb 08:00-09:00	240	720+/-63	295+/-22	374+/-11	348+/-25	441+/-18
28-Feb 09:00-10:00	239	588+/-59	263+/-21	351+/-14	343+/-27	459+/-19
28-Feb 10:00-11:00	237	593+/-50	251+/-24	350+/-18	327+/-43	455+/-30
28-Feb 11:00-12:00	237	566+/-49	257+/-39	346+/-33	342+/-52	460+/-45
28-Feb 12:00-13:00	239	589+/-66	251+/-32	348+/-28	328+/-45	455+/-40
28-Feb 13:00-13:13	43	442+/-81	221+/-29	308+/-31	335+/-54	467+/-52

Report Directory

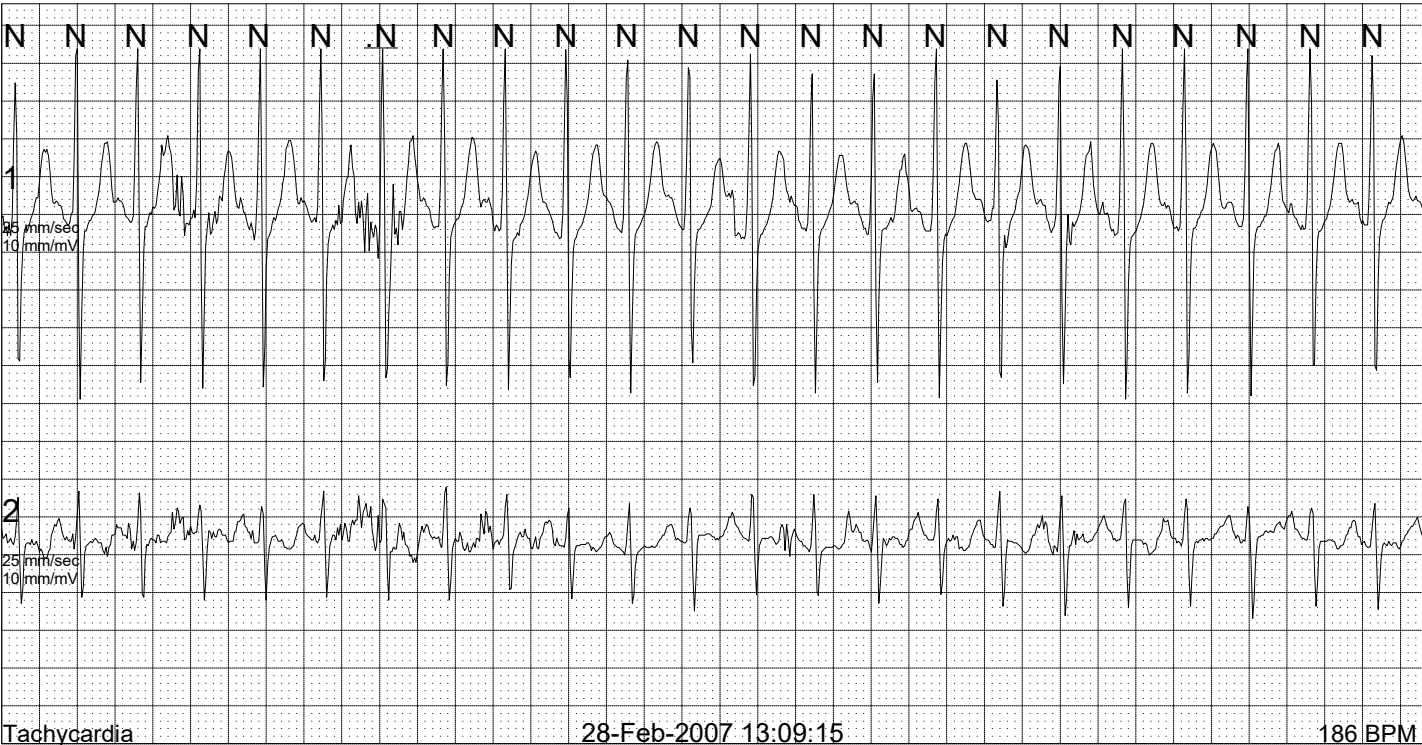
Description	Data Type	Page
Patient Demographics	Summary	1
Holter Summary w/ ST (skip 0's)	Summary	1
Interpretation	Comment	1
Hourly Summary	Summary	2
Analyst comments	Comment	2
QT Summary Channel 1	Summary	3
QT Summary Channel 2	Summary	4
QT Summary Channel 3	Summary	5
ST episode summary	Events	6
QT Time Table Channel 1	Summary	7
QT Time Table Channel 2	Summary	8
QT Time Table Channel 3	Summary	9
Report directory	Directory	10
Heart rate trend	Trend	12
Max HR strip	Strip	13:09:15 28-Feb 12
Min HR strip	Strip	00:59:48 28-Feb 13
RR interval trend	Trend	13
RR interval histogram	Histogram	14
Max RR strip	Strip	01:49:21 28-Feb 14
Min RR strip	Strip	13:09:00 28-Feb 15
VE percentage of all beats trend	Trend	15
SVE percentage of all beats trend	Trend	16
HRV summary	Summary	17
Max QToc strip	Strip	00:32:30 28-Feb 18
Max QTpc strip	Strip	00:32:30 28-Feb 18
P-R Interval Trend (12SL)	Trend	19
Q-T Interval Trend (12SL)	Trend	19
ST J+60 Trend - Lead II	Trend	20
ST J+60 Trend - Lead V1	Trend	20
ST J+60 Trend - Lead V5	Trend	20
High Res ST Trends 3 Channels	Summary	21
	Strip	14:34:54 27-Feb 22
	Strip	18:56:47 27-Feb 22
	Strip	23:27:16 27-Feb 23
	Strip	23:42:27 27-Feb 23
	Strip	23:42:39 27-Feb 24
	Strip	01:45:56 28-Feb 24
	Strip	01:49:21 28-Feb 25
	Strip	05:08:14 28-Feb 25

Report Directory

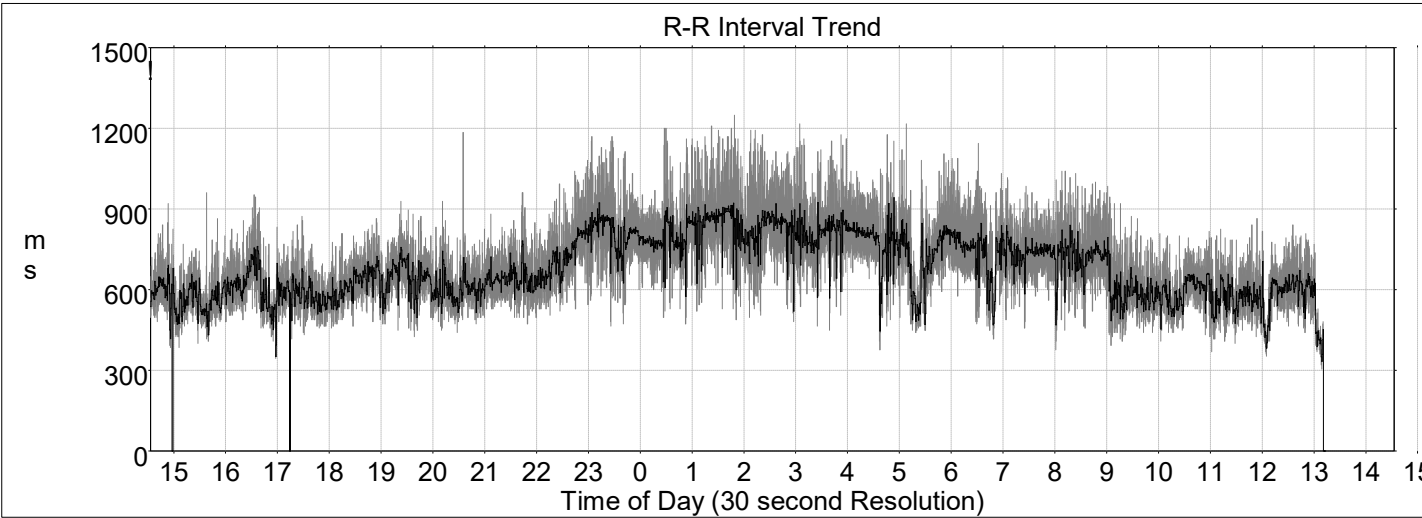
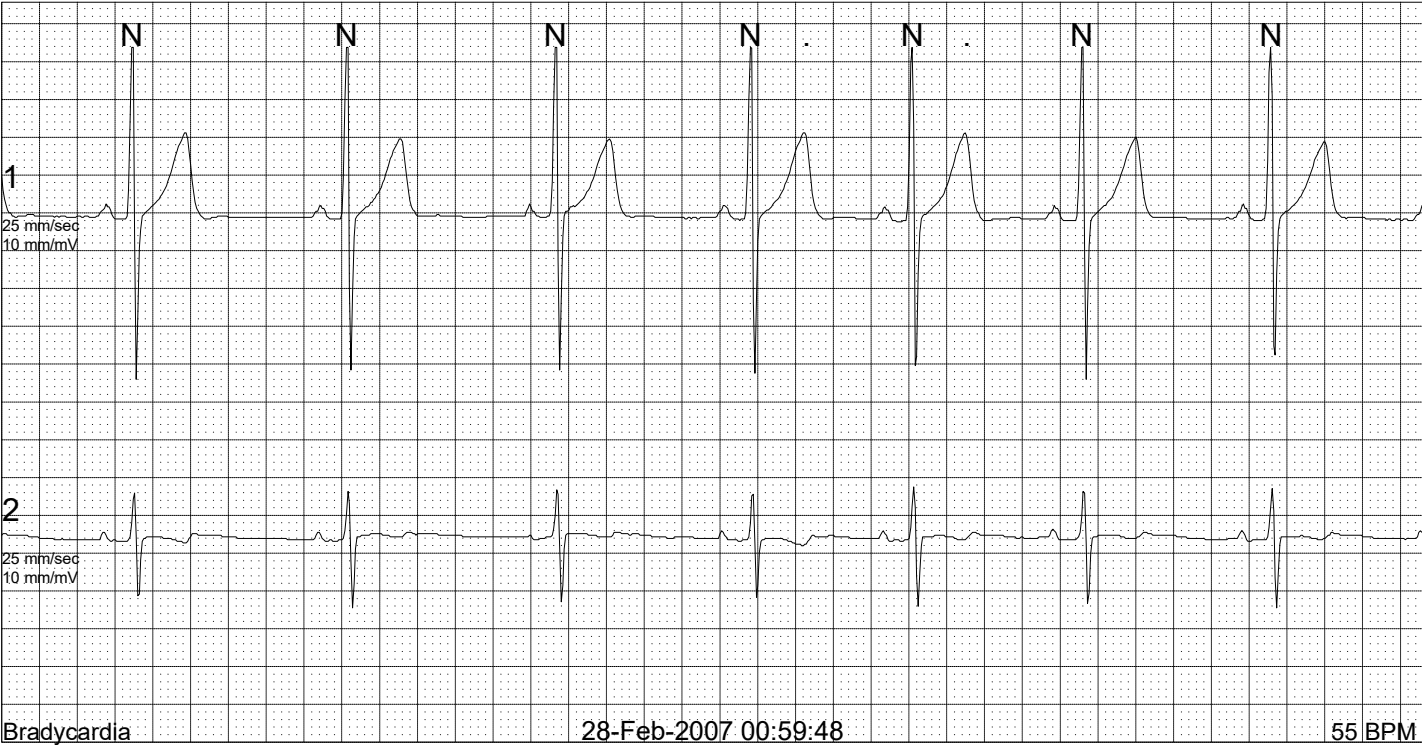
Description	Data Type			Page
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	Strip	13:09:17	28-Feb	26
	Strip	13:10:05	28-Feb	27

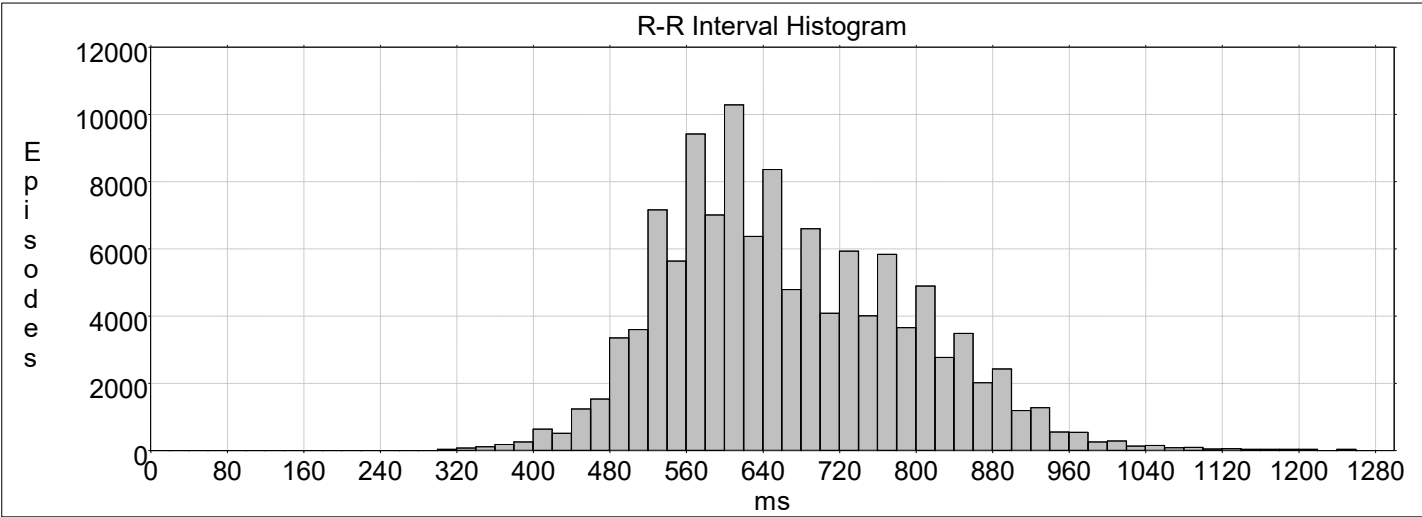


Max Heart Rate

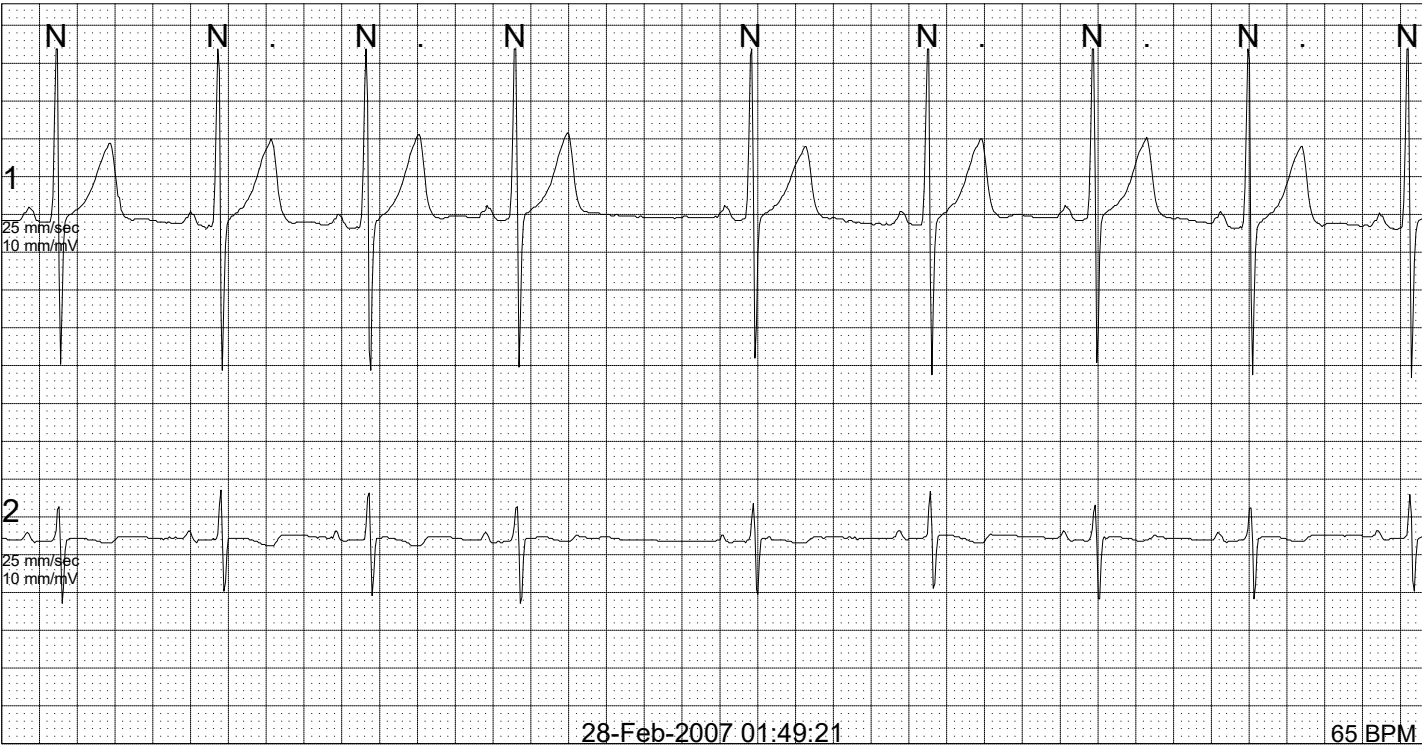


Min Heart Rate

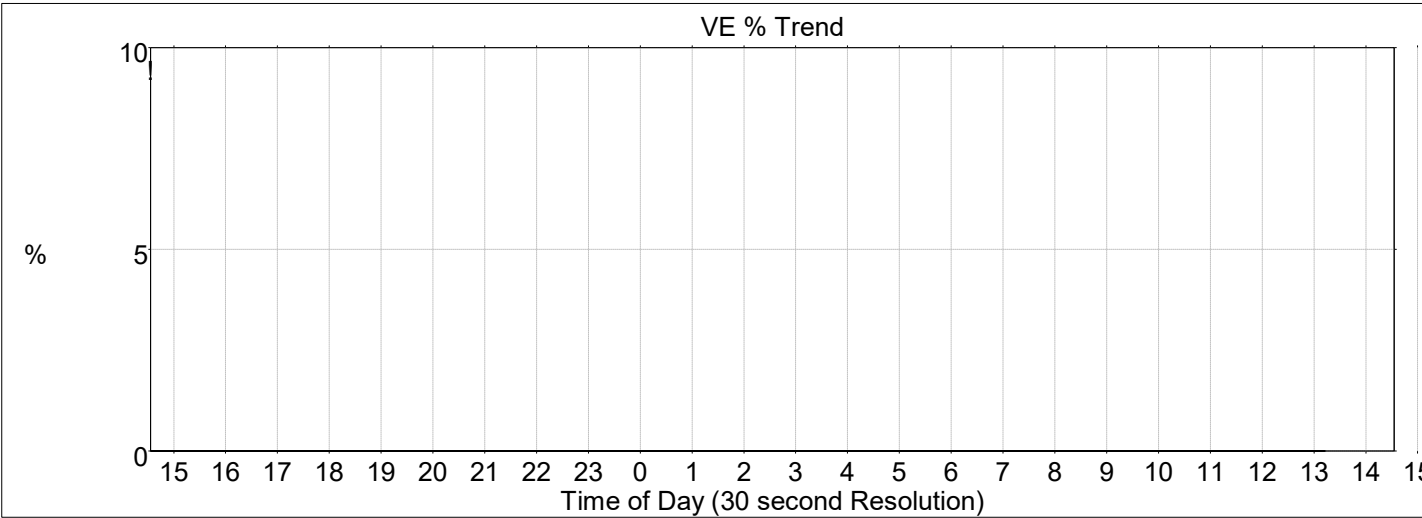
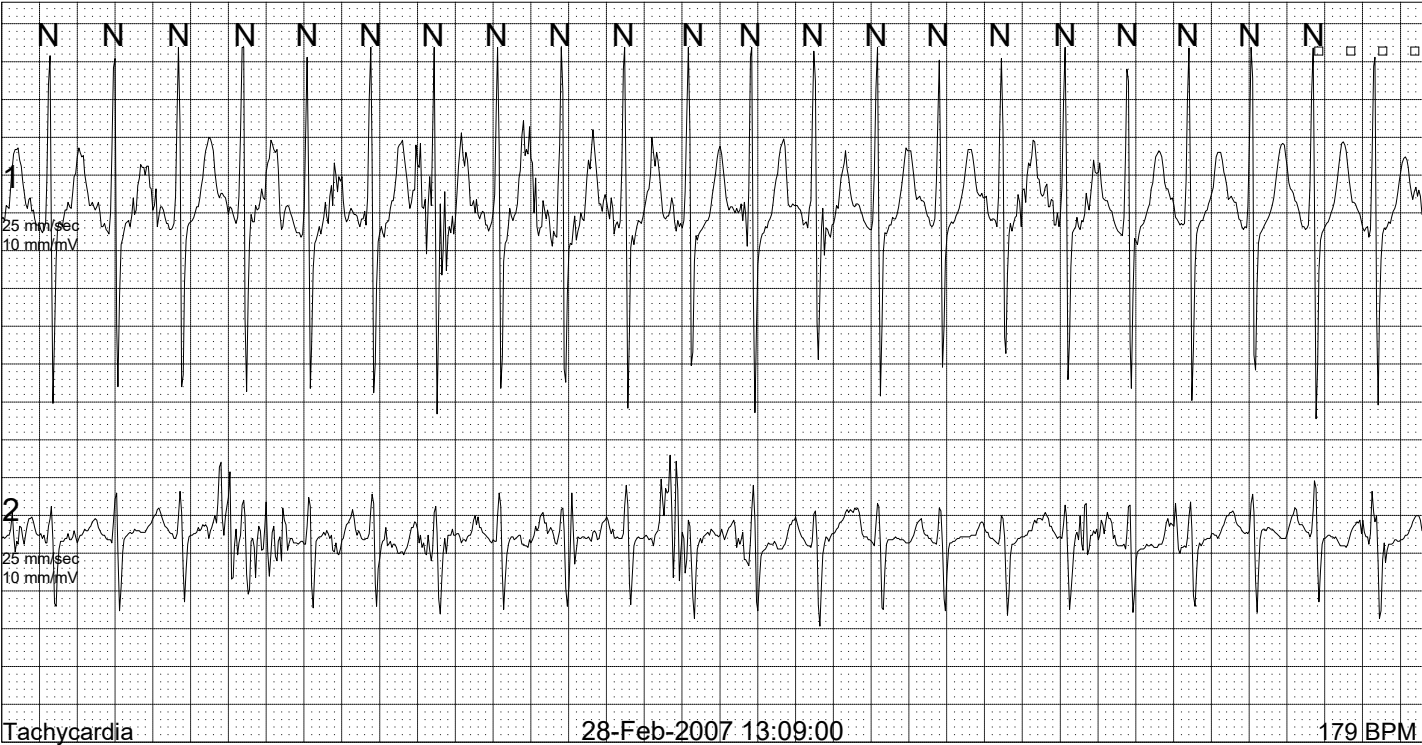


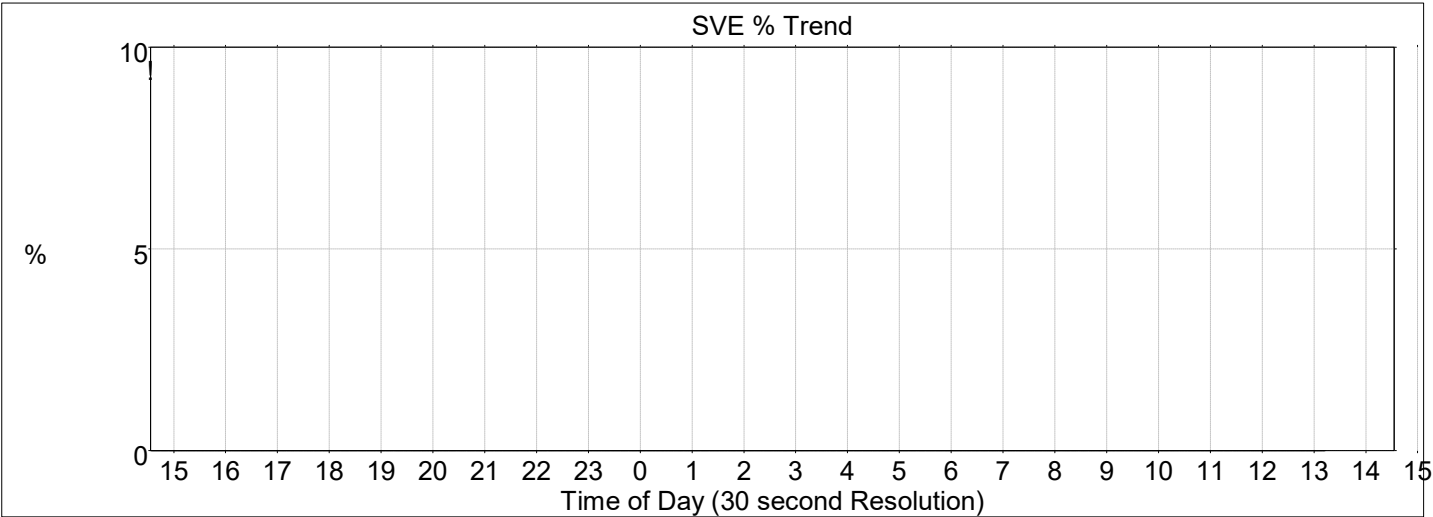


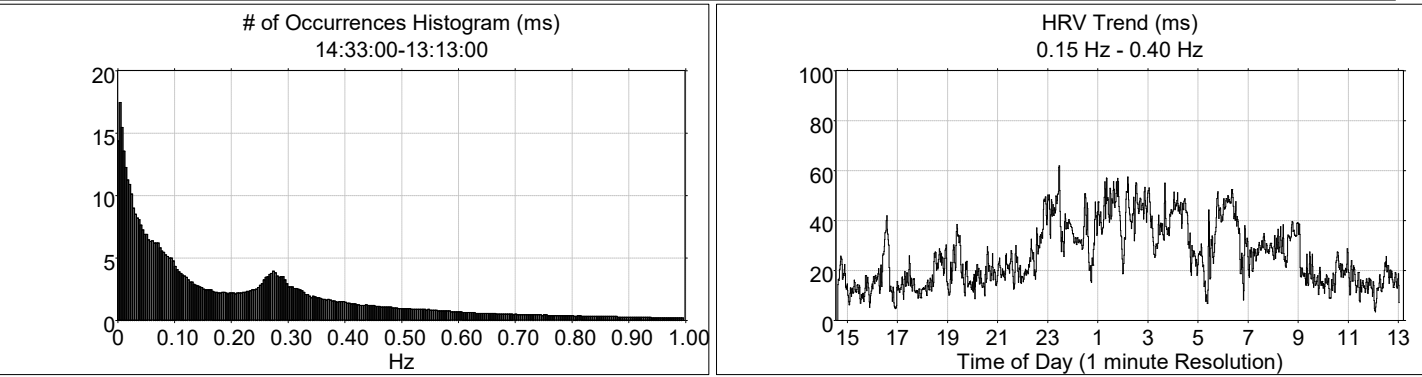
Max R-R



Minimum R-R







Spectral Power

35.64 ms	Very Low Frequency	(0.0033 - 0.0400 Hz)
28.10 ms	Low Frequency	(0.0400 - 0.1500 Hz)
21.54 ms	High Frequency	(0.1500 - 0.4000 Hz)
51.08 ms	Wideband Frequency	(0.0033 - 1.7070 Hz)
21.54 ms	User Frequency	(0.1500 - 0.4000 Hz)
Low/High Ratio: 1.30		

Time Domain

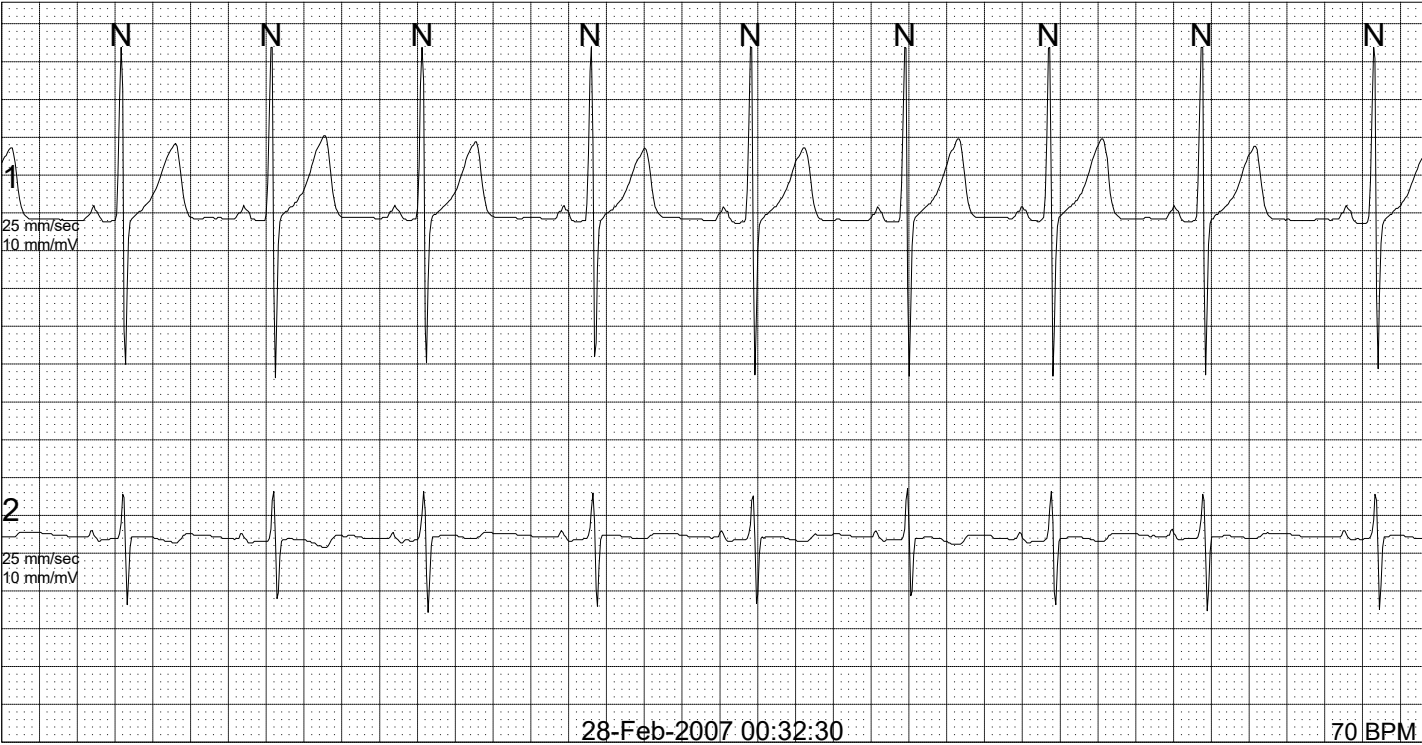
664 ms	Mean NN
123 ms	SDNN
102 ms	SDANN
67 ms	ASDNN
43 ms	rMSSD
19.7%	pNN50
9.3%	pNN50a
10.3%	pNN50b
23348 beats	BB50
11065 beats	BB50a
12283 beats	BB50b

Exclusions

Time analyzed: 81600 sec. (22:40:00)
from 14:33:00 27-Feb-2007 to 13:13:00 28-Feb-2007
Time excluded: 3% (00:43:49)
Exclude RR interval ratios: < 0.80 > 1.20
Exclude RR intervals: < 150 ms > 5000 ms

before	Intervals Excluded	after
1	Fusion	1
1	Idioventricular	1
1	Ventricular Escape	1
1	Ventricular	1
1	Questionable	1
1	Junctional	1
1	Aberrant	1
1	Supraventricular	1
1	Paced Fusion	1
1	Dual Paced	1
1	Atrial Paced	1
1	Ventricular Paced	1

Max QToc



Max QTpc

