24 hour blood pressure monitoring results

Patient name: **SAMPL_Compar** Code: **F8I01**

Address: Phone:

Notes: **Example for BPCompare (comparison of two monitorings)**

Age (years): **48** Sex: **Undefined** Height (cm): **178** Length of aorta

Weight (kg): **97** Patient card No.: Department Room:

Monitor: **BPLab MnSDP-2 #04111372 Rev.BP005-1.123.2.63.2.16 2004/08/05**

Test start: **18/08/2005 (10:40)** Total monitoring time: **26:44**

Expected readings: **97.** Successful: **91 (94.0%).** Analyzed: **90.**

Daytime (07:00 - 23:00). Number of readings: 72

Average SYS	137 mmHg	Possibly high (135 ... 140)
Average DIA	86 mmHg	Possibly high (85 ... 90)
Time index SYS	47 %	High (>=30%)
Time index DIA	23 %	Possibly high (15% ... 30%)
Variability SYS	10 mmHg	Norm (<15)
Variability DIA	9 mmHg	Norm (<14)

Nighttime (23:01 - 06:59). Number of readings: 18

Average SYS	132 mmHg	High (>=125)
Average DIA	77 mmHg	High (>=75)
Time index SYS	66 %	High (>=30%)
Time index DIA	54 %	High (>=30%)
Variability SYS	12 mmHg	Norm (<15)
Variability DIA	13 mmHg	High (>=12)

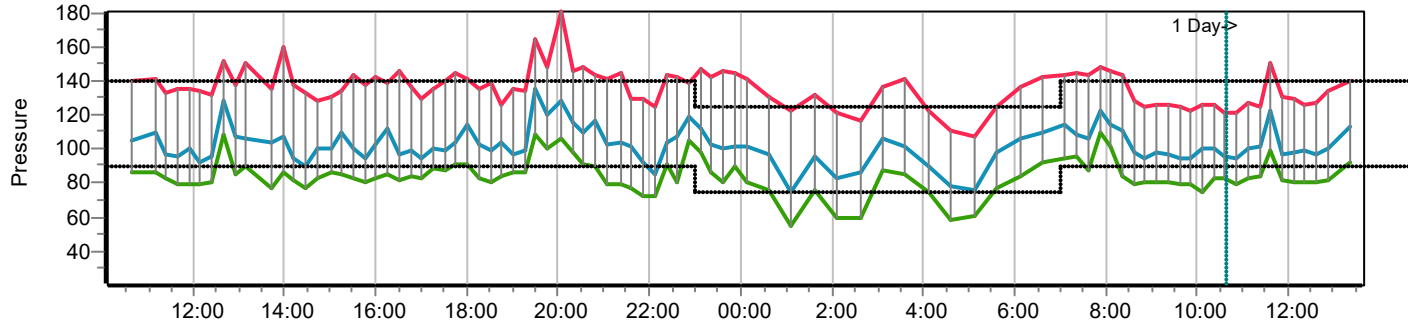
Average pulse pressure: **52 mmHg, Possibly high (46 ... 53)**

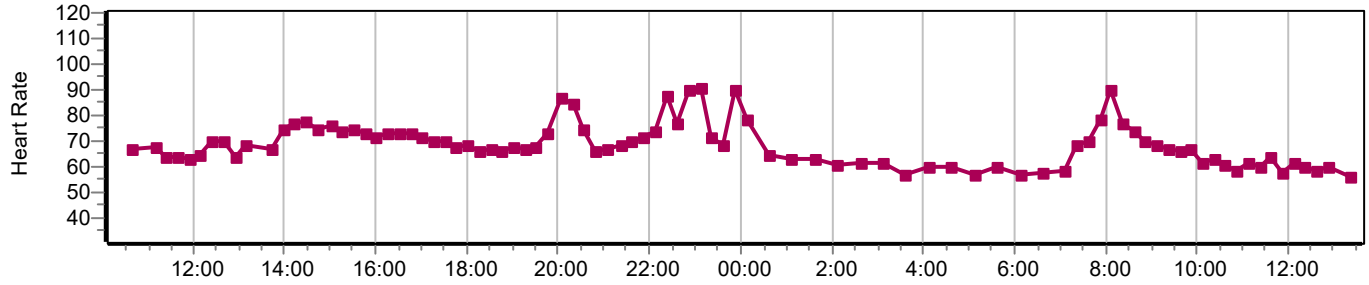
Degree of nocturnal fall SYS: **4%, Non-dipper (0% ... 10%)**

Degree of nocturnal fall DIA: **11%, Dipper (10% ... 20%)**

Morning Surge Kario: **35 mmHg, Norm (<37)**

BP monitoring data





Physician: _____ Doctor: _____

Date: "___" _____ 20 year

Reasons for test:

Estimating of 24h BP profile (the first monitoring)

Therapy: **Concor 2,5mg**

Arm (L/R), Arm circumference, Cuff size: **Undefined, , Undefined**

Sleep quality: **Undefined**

Interpretation:

According to the 24h ambulatory monitoring data against antihypertension therapy labile systolic-diastolic hypertension at day-time and stabile systolic-diastolic hypertension at night were diagnosed. The daily rhythm has changed: insufficient decrease of SBP at night.

Physician: _____ Doctor: _____

Date: "___" _____ 20 year

24/48 hours results. Number of readings: 90

	Minimum	Average	Maximum	Variability	Correct.variab.	
Systolic BP	108	136	181	11	---	mmHg
Diastolic BP	55	84	110	10	9	mmHg
Mean BP	75	102	136	11	---	mmHg
Pulse Pressure	34	52	75	7	---	mmHg
Heart Rate	56	69	91	8	---	Beats/min
Double Product	62	94	157	17	---	mmHg/min

Number of readings SYS > **37 (41%)** **AASI=0.296 Norm (<0.70)**
Number of readings DIA > **28 (31%)** **Median BP(SYS/DIA):137/83**

Daytime (07:00 - 23:00). Number of readings: 72

	Minimum	Average	Maximum	Variability	Correct.variab.	
Systolic BP	121	137	181	10	---	mmHg
Diastolic BP	72	86	110	9	---	mmHg
Mean BP	85	104	136	10	---	mmHg
Pulse Pressure	34	52	75	8	---	mmHg
Heart Rate	56	70	90	7	---	Beats/min
Double Product	71	96	157	15	---	mmHg/min

Number of readings SYS > **26 (36%)**
Number of readings DIA > 90 **16 (22%)**

Nighttime (23:01 - 06:59). Number of readings: 18

	Minimum	Average	Maximum	Variability	Correct.variab.	
Systolic BP	108	132	147	12	---	mmHg
Diastolic BP	55	77	98	13	---	mmHg
Mean BP	75	96	112	12	---	mmHg
Pulse Pressure	47	55	68	6	---	mmHg
Heart Rate	57	66	91	11	---	Beats/min
Double Product	62	87	134	20	---	mmHg/min

Number of readings SYS > **11 (61%)**
Number of readings DIA > 75 **12 (67%)**

Special period (10:00 - 10:00). Number of readings: 0

	Minimum	Average	Maximum	Variability	Correct.variab.	
Systolic BP	---	---	---	---	---	mmHg
Diastolic BP	---	---	---	---	---	mmHg
Mean BP	---	---	---	---	---	mmHg
Pulse Pressure	---	---	---	---	---	mmHg
Heart Rate	---	---	---	---	---	Beats/min
Double Product	---	---	---	---	---	mmHg/min

Number of readings SYS > **0 (0%)**
Number of readings DIA > 90 **0 (0%)**

Day 1 24/48 hours results. Number of readings: 80

	Minimum	Average	Maximum	Variability	Correct.variab.	
Systolic BP	108	137	181	11	---	mmHg
Diastolic BP	55	84	110	11	---	mmHg
Mean BP	75	102	136	11	---	mmHg
Pulse Pressure	34	53	75	7	---	mmHg
Heart Rate	57	70	91	8	---	Beats/min
Double Product	62	96	157	16	---	mmHg/min

AASI=0.296 Norm (<0.70)
Median BP(SYS/DIA):137/83

Day 1 Daytime (07:00 - 23:00). Number of readings: 62

	Minimum	Average	Maximum	Variability	Correct.variab.	
Systolic BP	122	138	181	10	---	mmHg
Diastolic BP	72	86	110	9	---	mmHg
Mean BP	85	104	136	10	---	mmHg
Pulse Pressure	34	52	75	8	---	mmHg
Heart Rate	59	71	90	7	---	Beats/min
Double Product	74	99	157	14	---	mmHg/min

Day 1 Nighttime (23:01 - 06:59). Number of readings: 18

	Minimum	Average	Maximum	Variability	Correct.variab.	
Systolic BP	108	132	147	12	---	mmHg
Diastolic BP	55	77	98	13	---	mmHg
Mean BP	75	96	112	12	---	mmHg
Pulse Pressure	47	55	68	6	---	mmHg
Heart Rate	57	66	91	11	---	Beats/min
Double Product	62	87	134	20	---	mmHg/min

Day 1 Special period (10:00 - 10:00). Number of readings: 0

	Minimum	Average	Maximum	Variability	Correct.variab.	
Systolic BP	---	---	---	---	---	mmHg
Diastolic BP	---	---	---	---	---	mmHg
Mean BP	---	---	---	---	---	mmHg
Pulse Pressure	---	---	---	---	---	mmHg
Heart Rate	---	---	---	---	---	Beats/min
Double Product	---	---	---	---	---	mmHg/min

Day 2 24/48 hours results. Number of readings: 10

	Minimum	Average	Maximum	Variability	Correct.variab.	
Systolic BP	121	131	151	9	---	mmHg
Diastolic BP	79	84	99	6	---	mmHg
Mean BP	94	102	123	9	---	mmHg
Pulse Pressure	41	47	52	4	---	mmHg
Heart Rate	56	60	64	2	---	Beats/min
Double Product	71	79	97	7	---	mmHg/min

AASI=0.296 Norm (<0.70)
Median BP(SYS/DIA):137/83

Day 2 Daytime (07:00 - 23:00). Number of readings: 10

	Minimum	Average	Maximum	Variability	Correct.variab.	
Systolic BP	121	131	151	9	---	mmHg
Diastolic BP	79	84	99	6	---	mmHg
Mean BP	94	102	123	9	---	mmHg
Pulse Pressure	41	47	52	4	---	mmHg
Heart Rate	56	60	64	2	---	Beats/min
Double Product	71	79	97	7	---	mmHg/min

Day 2 Nighttime (23:01 - 06:59). Number of readings: 0

	Minimum	Average	Maximum	Variability	Correct.variab.	
Systolic BP	---	---	---	---	---	mmHg
Diastolic BP	---	---	---	---	---	mmHg
Mean BP	---	---	---	---	---	mmHg
Pulse Pressure	---	---	---	---	---	mmHg
Heart Rate	---	---	---	---	---	Beats/min
Double Product	---	---	---	---	---	mmHg/min

Day 2 Special period (10:00 - 10:00). Number of readings: 0

	Minimum	Average	Maximum	Variability	Correct.variab.	
Systolic BP	---	---	---	---	---	mmHg
Diastolic BP	---	---	---	---	---	mmHg
Mean BP	---	---	---	---	---	mmHg
Pulse Pressure	---	---	---	---	---	mmHg
Heart Rate	---	---	---	---	---	Beats/min
Double Product	---	---	---	---	---	mmHg/min

Comparative estimation of monitoring results - Day 1 (18/08/2005 10:40) and Day 2 (19/08/2005 10:40)

Daytime

Parameter	Dynamics	Difference
Average SYS	138 mmHg / 131 mmHg	-7 mmHg (-5%) Decreasing
Average DIA	86 mmHg / 84 mmHg	-2 mmHg (-2%) Decreasing
Time index SYS	--- % / --- %	--- %
Time index DIA	--- % / --- %	--- %
Variability SYS	10 mmHg / 9 mmHg	-1 mmHg (-10%) Decreasing
Variability DIA	9 mmHg / 6 mmHg	-3 mmHg (-33%) Decreasing
Average HR	71 Beats/min / 60 Beats/min	-11 Beats/min (-15%) Decreasing

Nighttime

Parameter	Dynamics	Difference
Average SYS	132 mmHg / --- mmHg	--- mmHg (---)
Average DIA	77 mmHg / --- mmHg	--- mmHg (---)
Time index SYS	--- % / --- %	--- %
Time index DIA	--- % / --- %	--- %
Variability SYS	12 mmHg / --- mmHg	--- mmHg (---)
Variability DIA	13 mmHg / --- mmHg	--- mmHg (---)
Average HR	66 Beats/min / --- Beats/min	--- Beats/min (---)

24 hour

Parameter	Dynamics	Difference
Degree of nocturnal fall SYS	4 % / --- %	--- %
Degree of nocturnal fall DIA	11 % / --- %	--- %
Average PP	53 mmHg / 47 mmHg	-6 mmHg (-11%) Decreasing

Physician: _____ Doctor: _____

24/48 hours results. Number of readings: 90

	Pressure	At HR	Time
Maximum SYS	181 mmHg	87 Beats/min	20:04
Maximum DIA	110 mmHg	79 Beats/min	07:52
Minimum SYS	108 mmHg	57 Beats/min	05:07
Minimum DIA	55 mmHg	63 Beats/min	01:07

Maximum HR: **91 Beats/min In 23:07**
Minimum HR: **56 Beats/min In 13:22**

Daytime (07:00 - 23:00). Number of readings: 72

	Pressure	At HR	Time
Maximum SYS	181 mmHg	87 Beats/min	20:04
Maximum DIA	110 mmHg	79 Beats/min	07:52
Minimum SYS	121 mmHg	59 Beats/min	10:52
Minimum DIA	72 mmHg	72 Beats/min	21:52

Maximum HR: **90 Beats/min In 22:52**
Minimum HR: **56 Beats/min In 13:22**

Nighttime (23:01 - 06:59). Number of readings: 18

	Pressure	At HR	Time
Maximum SYS	147 mmHg	91 Beats/min	23:07
Maximum DIA	98 mmHg	91 Beats/min	23:07
Minimum SYS	108 mmHg	57 Beats/min	05:07
Minimum DIA	55 mmHg	63 Beats/min	01:07

Maximum HR: **91 Beats/min In 23:07**
Minimum HR: **57 Beats/min In 03:37**

Special period (10:00 - 10:00). Number of readings: 0

	Pressure	At HR	Time
Maximum SYS	---	---	---
Maximum DIA	---	---	---
Minimum SYS	---	---	---
Minimum DIA	---	---	---

Maximum HR: **---**
Minimum HR: **---**

Day 1 24/48 hours results. Number of readings: 80

	Pressure	At HR	Time
Maximum SYS	181 mmHg	87 Beats/min	20:04
Maximum DIA	110 mmHg	79 Beats/min	07:52
Minimum SYS	108 mmHg	57 Beats/min	05:07
Minimum DIA	55 mmHg	63 Beats/min	01:07

Maximum HR: **91 Beats/min In 23:07**
Minimum HR: **57 Beats/min In 03:37**

Day 1 Daytime (07:00 - 23:00). Number of readings: 62

	Pressure	At HR	Time
Maximum SYS	181 mmHg	87 Beats/min	20:04
Maximum DIA	110 mmHg	79 Beats/min	07:52
Minimum SYS	122 mmHg	61 Beats/min	10:37
Minimum DIA	72 mmHg	72 Beats/min	21:52

Maximum HR: **90 Beats/min In 22:52**
Minimum HR: **59 Beats/min In 07:07**

Day 1 Nighttime (23:01 - 06:59). Number of readings: 18

	Pressure	At HR	Time
Maximum SYS	147 mmHg	91 Beats/min	23:07
Maximum DIA	98 mmHg	91 Beats/min	23:07
Minimum SYS	108 mmHg	57 Beats/min	05:07
Minimum DIA	55 mmHg	63 Beats/min	01:07

Maximum HR: **91 Beats/min In 23:07**
Minimum HR: **57 Beats/min In 03:37**

Day 1 Special period (10:00 - 10:00). Number of readings: 0

	Pressure	At HR	Time
Maximum SYS	---	---	---
Maximum DIA	---	---	---
Minimum SYS	---	---	---
Minimum DIA	---	---	---

Maximum HR: **---**
Minimum HR: **---**

Day 2 24/48 hours results. Number of readings: 10

	Pressure	At HR	Time
Maximum SYS	151 mmHg	64 Beats/min	11:37
Maximum DIA	99 mmHg	64 Beats/min	11:37
Minimum SYS	121 mmHg	59 Beats/min	10:52
Minimum DIA	79 mmHg	59 Beats/min	10:52

Maximum HR: **64 Beats/min In 11:37**
Minimum HR: **56 Beats/min In 13:22**

Day 2 Daytime (07:00 - 23:00). Number of readings: 10

	Pressure	At HR	Time
Maximum SYS	151 mmHg	64 Beats/min	11:37
Maximum DIA	99 mmHg	64 Beats/min	11:37
Minimum SYS	121 mmHg	59 Beats/min	10:52
Minimum DIA	79 mmHg	59 Beats/min	10:52

Maximum HR: **64 Beats/min In 11:37**
Minimum HR: **56 Beats/min In 13:22**

Day 2 Nighttime (23:01 - 06:59). Number of readings: 0

	Pressure	At HR	Time
Maximum SYS	---	---	---
Maximum DIA	---	---	---
Minimum SYS	---	---	---
Minimum DIA	---	---	---

Maximum HR: **---**
Minimum HR: **---**

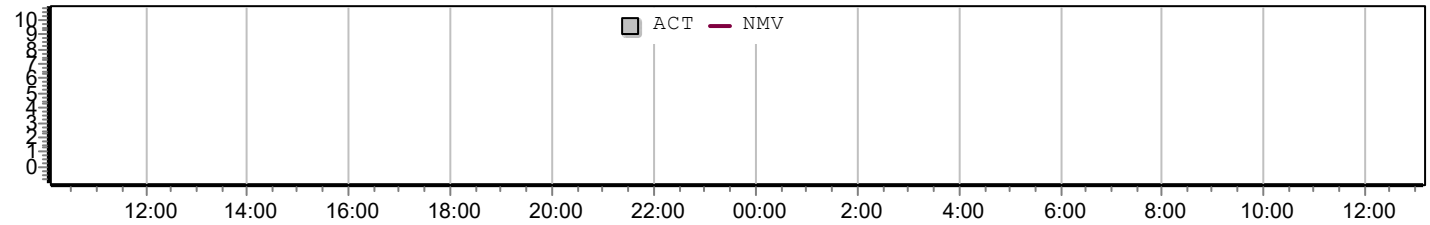
Day 2 Special period (10:00 - 10:00). Number of readings: 0

	Pressure	At HR	Time
Maximum SYS	---	---	---
Maximum DIA	---	---	---
Minimum SYS	---	---	---
Minimum DIA	---	---	---

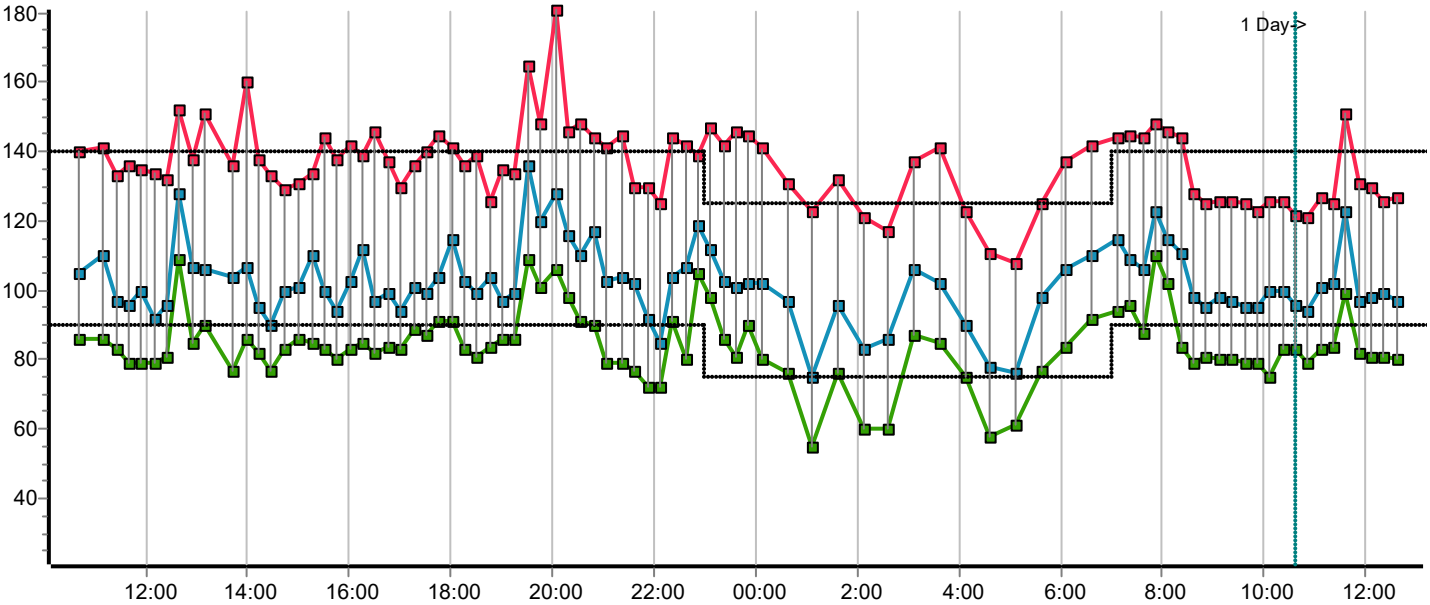
Maximum HR: **---**
Minimum HR: **---**

24 hour graphs of BP, HR and activity, Day 1

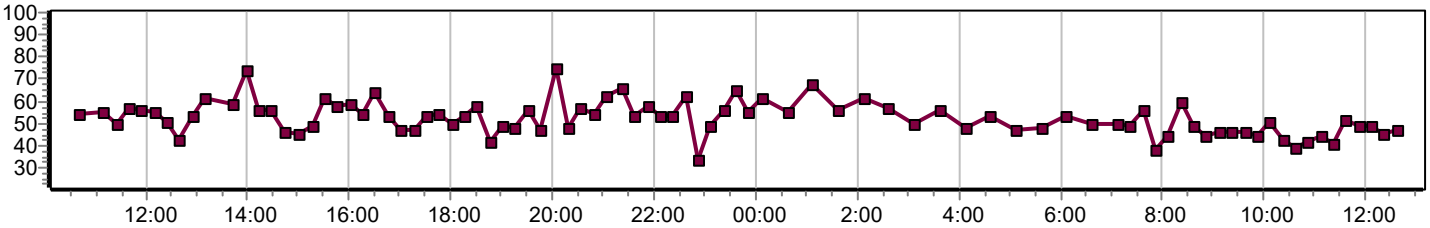
Activity parameters



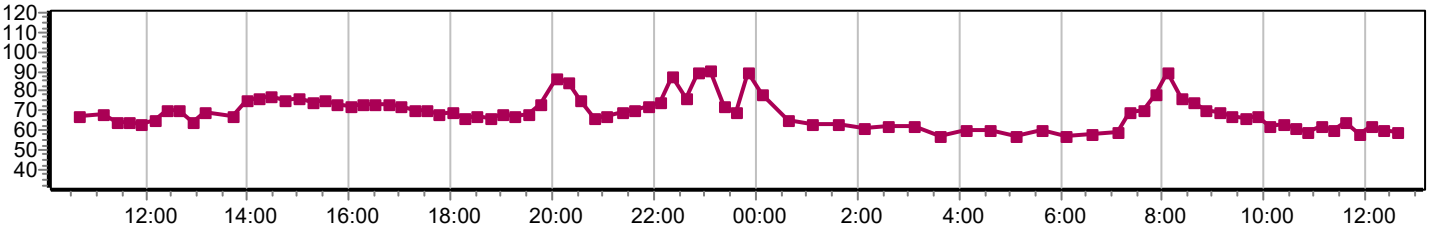
SYS, DIA and MBP, mmHg



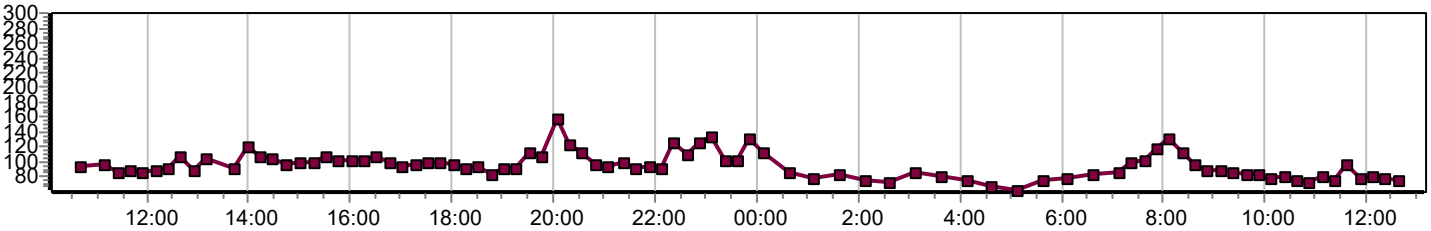
Pulse Pressure, mmHg



Heart Rate, Beats/min

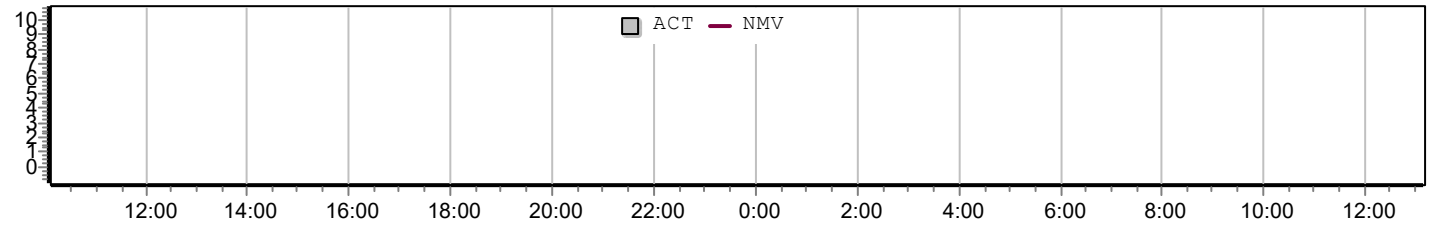


Double Product Index (DPI), mmHg/min

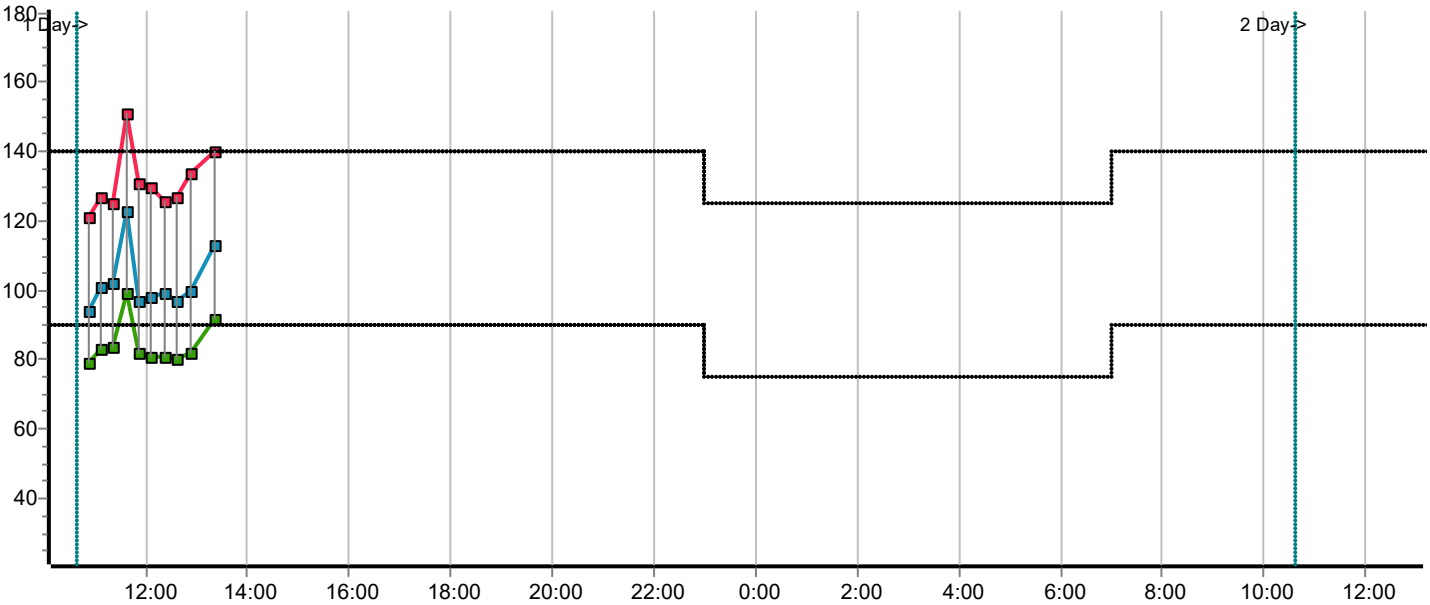


24 hour graphs of BP, HR and activity, Day 2

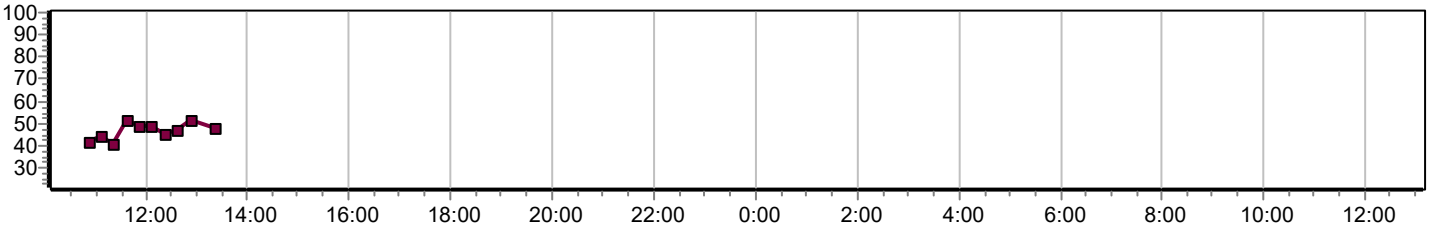
Activity parameters



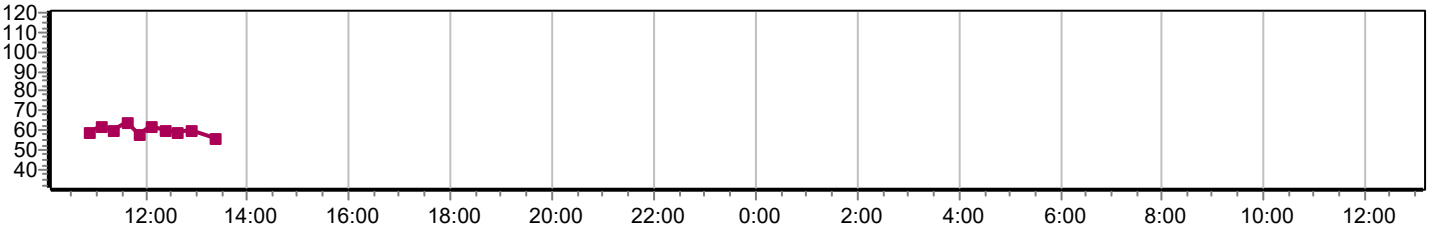
SYS, DIA and MBP, mmHg



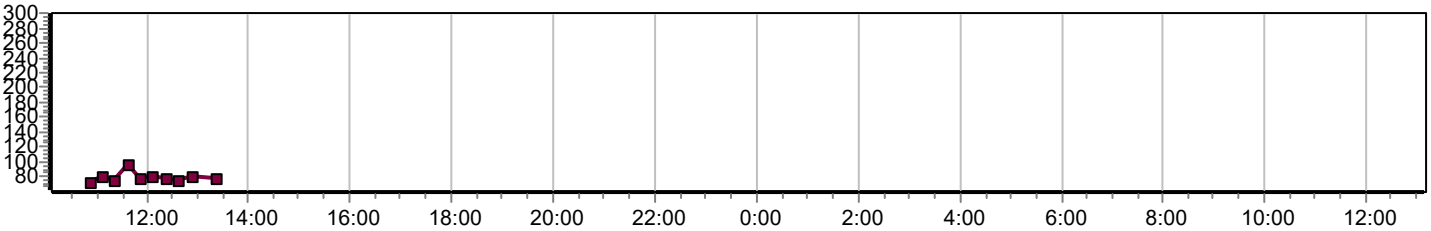
Pulse Pressure, mmHg



Heart Rate, Beats/min



Double Product Index (DPI), mmHg/min



ABPM Data

No.	Time	Pressure				HR	DP	Comment
		SYS	MBP	DIA	PP			
1	10:40	140	105	86	54	67	94	
3	11:10	141	110	86	55	68	96	
4	11:25	133	97	83	50	64	85	
5	11:40	136	96	79	57	64	87	
6	11:55	135	100	79	56	63	85	
7	12:10	134	92	79	55	65	87	
8	12:25	132	96	81	51	70	92	
9	12:40	152	128	109	43	70	106	
10	12:55	138	107	85	53	64	88	
11	13:10	151	106	90	61	69	104	
14	13:43	136	104	77	59	67	91	
15	13:58	160	107	86	74	75	120	
16	14:13	138	95	82	56	77	106	
17	14:28	133	90	77	56	78	104	
18	14:43	129	100	83	46	75	97	
20	15:01	131	101	86	45	76	100	
21	15:16	134	110	85	49	74	99	
22	15:31	144	100	83	61	75	108	
23	15:46	138	94	80	58	73	101	
24	16:01	142	103	83	59	72	102	
25	16:16	139	112	85	54	73	101	
26	16:31	146	97	82	64	73	107	
27	16:46	137	99	84	53	73	100	
28	17:01	130	94	83	47	72	94	
29	17:16	136	101	89	47	70	95	
30	17:31	140	99	87	53	70	98	
31	17:46	145	104	91	54	68	99	
32	18:01	141	115	91	50	69	97	
33	18:16	136	103	83	53	66	90	
34	18:31	139	99	81	58	67	93	
35	18:46	126	104	84	42	66	83	
36	19:01	135	97	86	49	68	92	
37	19:16	134	99	86	48	67	90	
38	19:31	165	136	109	56	68	112	
39	19:46	148	120	101	47	73	108	
41	20:04	181	128	106	75	87	157	
42	20:19	146	116	98	48	85	124	
43	20:34	148	110	91	57	75	111	
44	20:49	144	117	90	54	66	95	
45	21:04	141	103	79	62	67	94	
47	21:22	145	104	79	66	69	100	
48	21:37	130	102	77	53	70	91	
49	21:52	130	92	72	58	72	94	
50	22:07	125	85	72	53	74	92	
51	22:22	144	104	91	53	88	127	
52	22:37	142	107	80	62	77	109	
53	22:52	139	119	105	34	90	125	
54	23:07	147	112	98	49	91	134	
55	23:22	142	103	86	56	72	102	
56	23:37	146	101	81	65	69	101	

ABPM Data

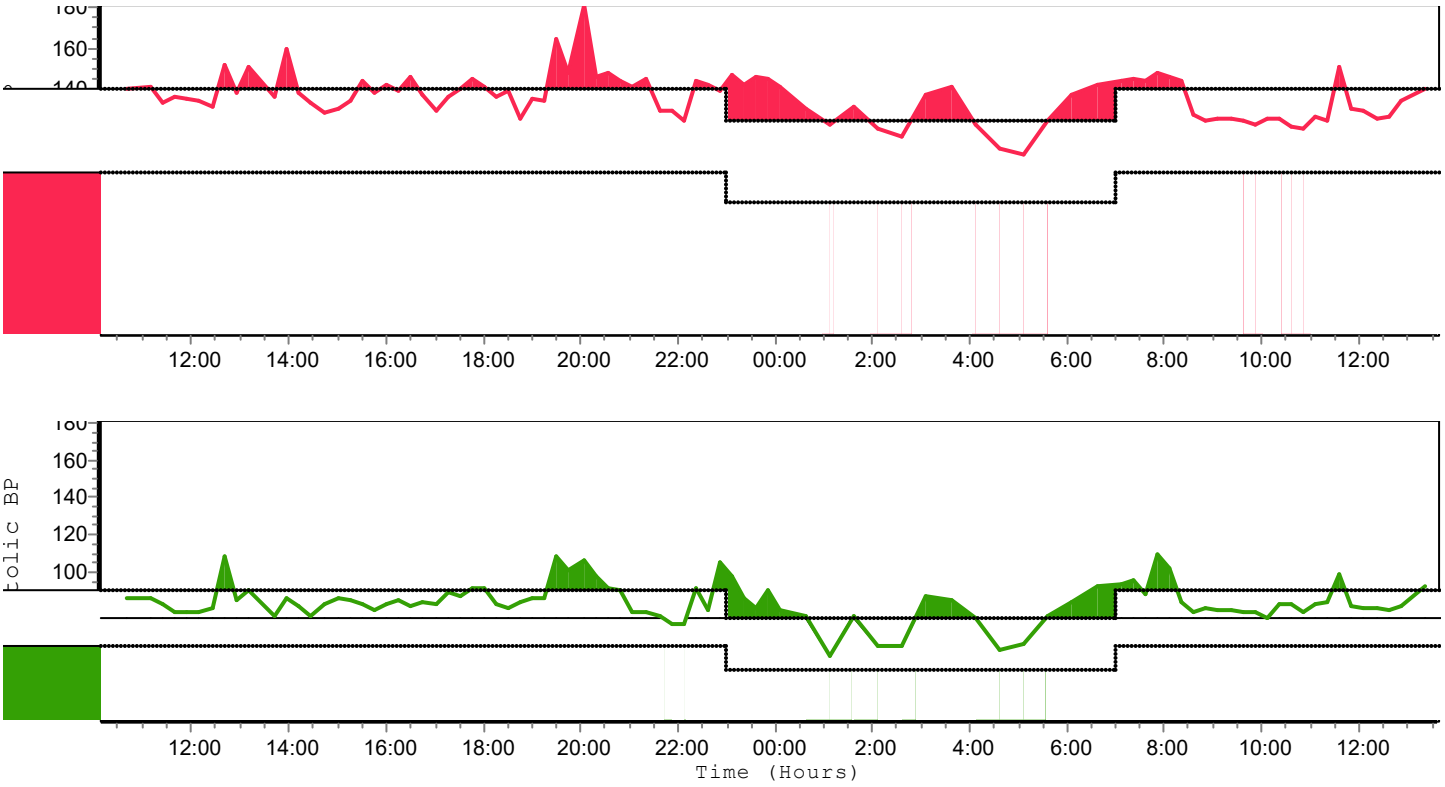
No.	Time	Pressure				HR	DP	Comment
		SYS	MBP	DIA	PP			
57	23:52	145	102	90	55	90	130	
58	00:07	141	102	80	61	79	111	
59	00:37	131	97	76	55	65	85	
60	01:07	123	75	55	68	63	77	
61	01:37	132	96	76	56	63	83	
62	02:07	121	83	60	61	61	74	
63	02:37	117	86	60	57	62	73	
64	03:07	137	106	87	50	62	85	
65	03:37	141	102	85	56	57	80	
66	04:07	123	90	75	48	60	74	
67	04:37	111	78	58	53	60	67	
68	05:07	108	76	61	47	57	62	
69	05:37	125	98	77	48	60	75	
70	06:07	137	106	84	53	57	78	
71	06:37	142	110	92	50	58	82	
72	07:07	144	115	94	50	59	85	
73	07:22	145	109	96	49	69	100	
74	07:37	144	106	88	56	70	101	
75	07:52	148	123	110	38	79	117	
76	08:07	146	115	102	44	90	131	
77	08:22	144	111	84	60	77	111	
78	08:37	128	98	79	49	74	95	
79	08:52	125	95	81	44	70	88	
80	09:07	126	98	80	46	69	87	
81	09:22	126	97	80	46	67	84	
82	09:37	125	95	79	46	66	82	
83	09:52	123	95	79	44	67	82	
84	10:07	126	100	75	51	62	78	
85	10:22	126	100	83	43	63	79	
86	10:37	122	96	83	39	61	74	
87	10:52	121	94	79	42	59	71	
88	11:07	127	101	83	44	62	79	
89	11:22	125	102	84	41	60	75	
90	11:37	151	123	99	52	64	97	
91	11:52	131	97	82	49	58	76	
92	12:07	130	98	81	49	62	81	
93	12:22	126	99	81	45	60	76	
94	12:37	127	97	80	47	59	75	
95	12:52	134	100	82	52	60	80	
97	13:22	140	113	92	48	56	78	

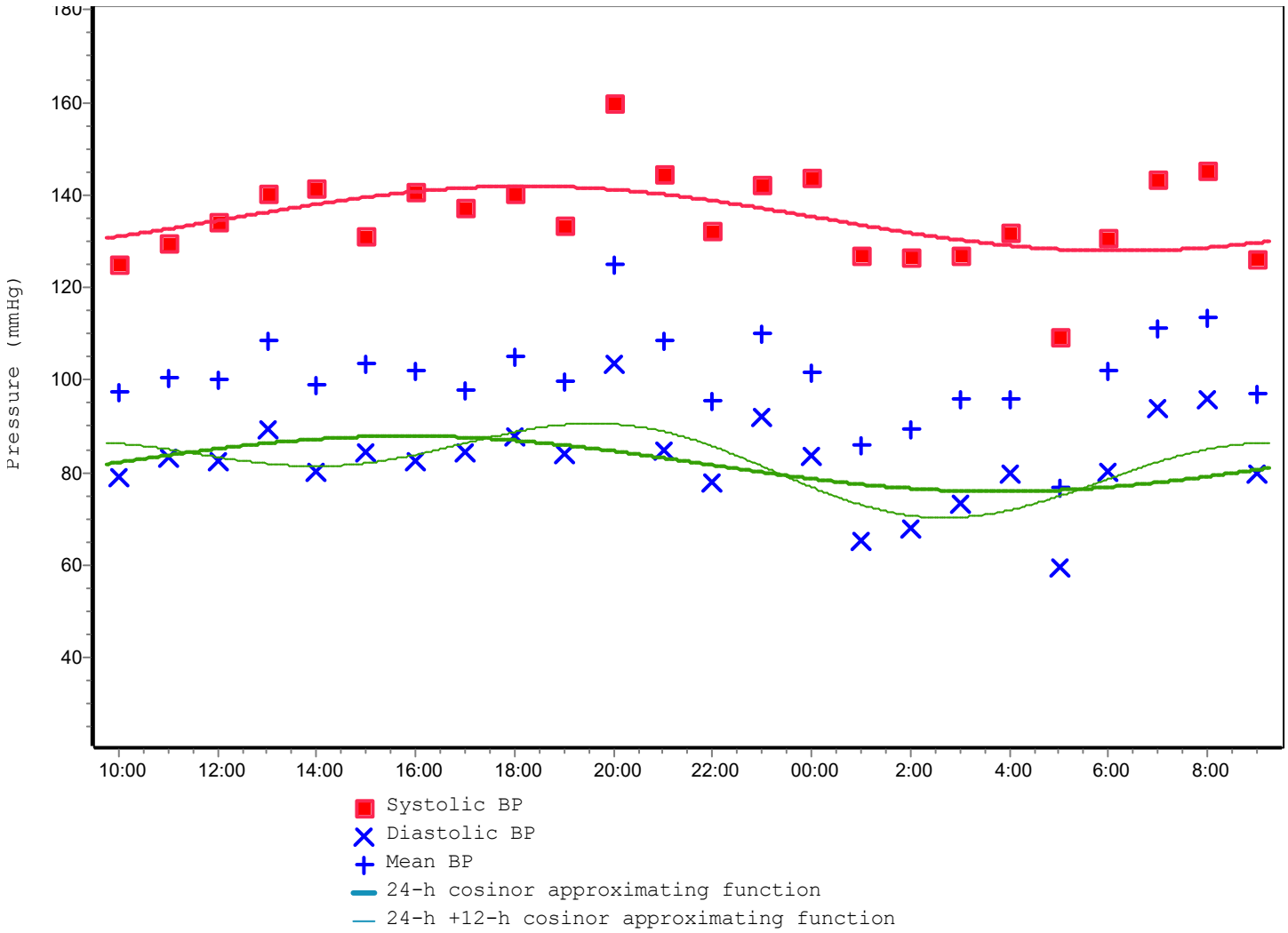
Pressure load (hypertension episodes)

	24 hour	Day	Night	Special	
SYS limits	---	140	125	140	mmHg
DIA limits	---	90	75	90	mmHg
Area under curve SYS	107	47	60	---	mmHg
Norm. area under curve SYS	4	3	8	---	mmHg
Time index SYS	53	47	66	---	%
Readings index SYS	45	40	61	---	%
Area under curve DIA	72	30	41	---	mmHg
Norm. area under curve DIA	3	2	5	---	mmHg
Time index DIA	34	23	54	---	%
Readings index DIA	32	23	67	---	%

Hypotension load

	24 hour	Day	Night	Special	
SYS limits	---	100	85	100	mmHg
DIA limits	---	60	48	60	mmHg
Area under curve SYS	0	0	0	---	mmHg
Norm. area under curve SYS	0	0	0	---	mmHg
Time index SYS	0	0	0	---	%
Readings index SYS	0	0	0	---	%
Area under curve DIA	0	0	0	---	mmHg
Norm. area under curve DIA	0	0	0	---	mmHg
Time index DIA	0	0	0	---	%
Readings index DIA	0	0	0	---	%





Chronobiological analysis (cosinor method)

	MESOR (mmHg)	24-h. amplitude (mmHg)	24-h. acrophase (Hour)	12-h. amplitude (mmHg)	12-h. acrophase (Hour)
SYS	135	7 (3)	18:14 (01:28)	--- (---)	--- (---)
DIA	82	6 (2)	15:48 (01:35)	6 (2)	20:24 (00:41)
MBP	101	--- (---)	--- (---)	6 (2)	20:34 (00:46)

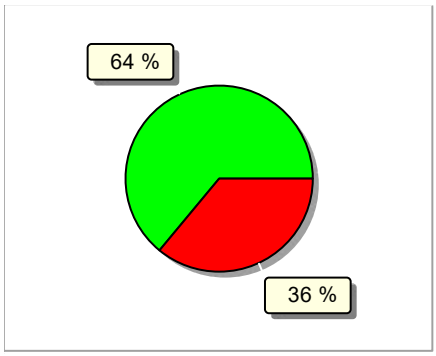
Morning trend (6:00 - 12:00)

	Systolic BP		Diastolic		
Morning Surge Kario	35	Norm (<37)	---		mmHg
Amplitude of morning raise	40	Norm (<56)	52	High (>=36)	mmHg
Velocity of morning raise	15	High (>=10)	16	High (>=6)	mmHg/hour
Morning Max.	151		110		mmHg
Morning Max/night average	115		143		%
Trend deviation	19		18		mmHg
Over-regulation %	382		271		%
Max. velocity	22		21		mmHg/hour
Morning index Max.	613		443		(mmHg/min)^2

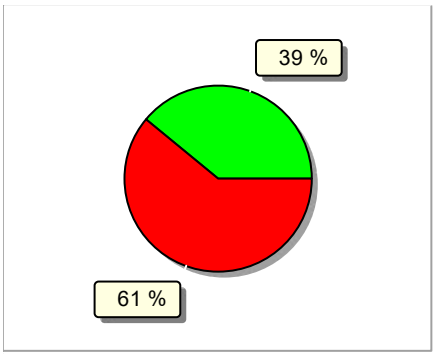
Hourly average

Hours	SYS	DIA	HR	Measurements
1 - 2h	138	85	66	3
2 - 3h	134	80	66	4
3 - 4h	147	95	68	3
4 - 5h	142	80	74	4
5 - 6h	134	84	75	4
6 - 7h	141	82	73	4
7 - 8h	136	86	71	4
8 - 9h	140	86	68	4
9 - 10h	140	91	67	4
10 - 11h	156	99	80	4
11 - 12h	140	81	68	4
12 - 13h	135	79	78	4
13 - 14h	144	92	80	4
14 - 15h	139	82	78	3
15 - 16h	128	66	63	2
16 - 17h	119	60	62	2
17 - 18h	139	86	60	2
18 - 19h	117	66	60	2
19 - 20h	116	69	58	2
20 - 21h	140	88	58	2
21 - 22h	145	97	69	4
22 - 23h	136	86	78	4
23 - 24h	125	80	67	4
24 - 25h	124	80	61	4
25 - 26h	134	87	61	4
26 - 27h	129	81	60	4

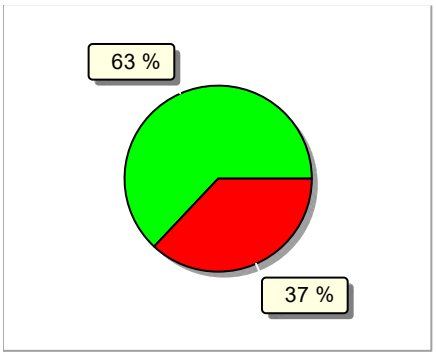
Values above the limit



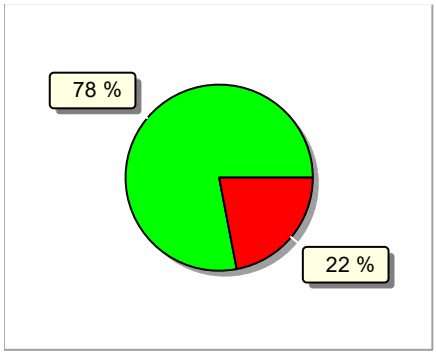
SYS (day)



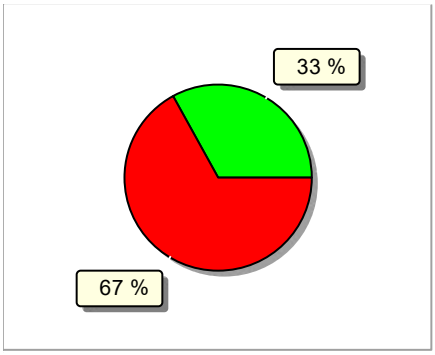
SYS (night)



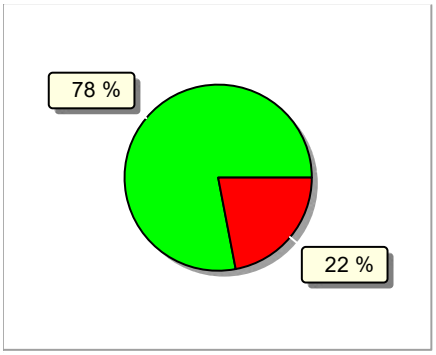
SYS (total)



DIA (day)

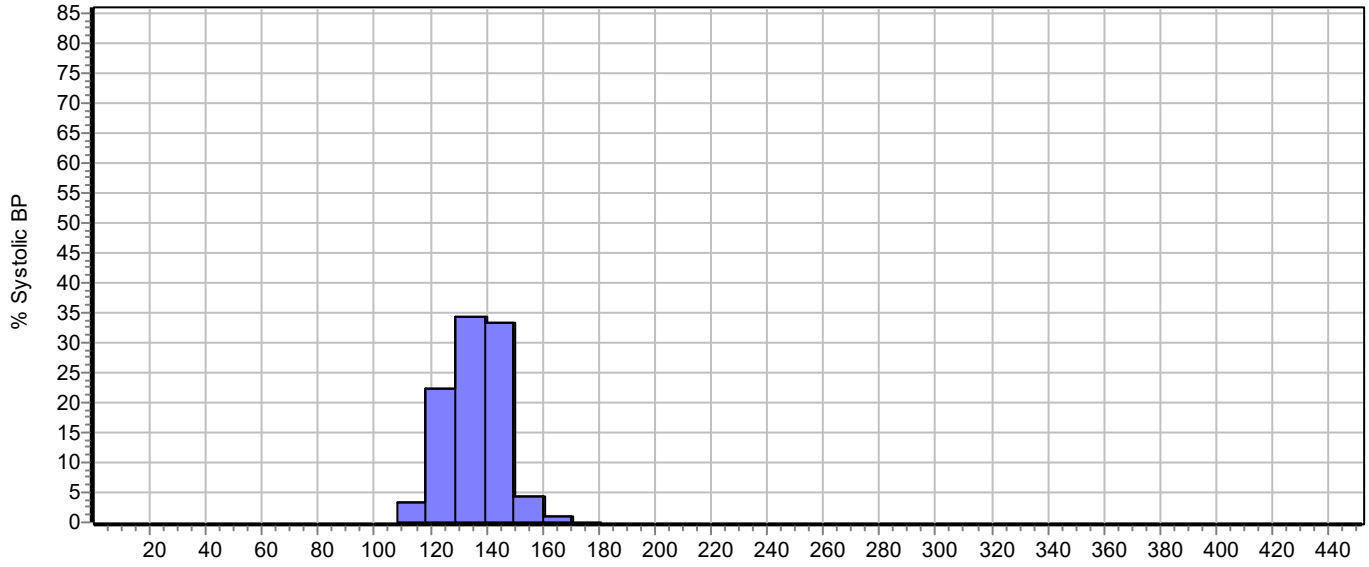


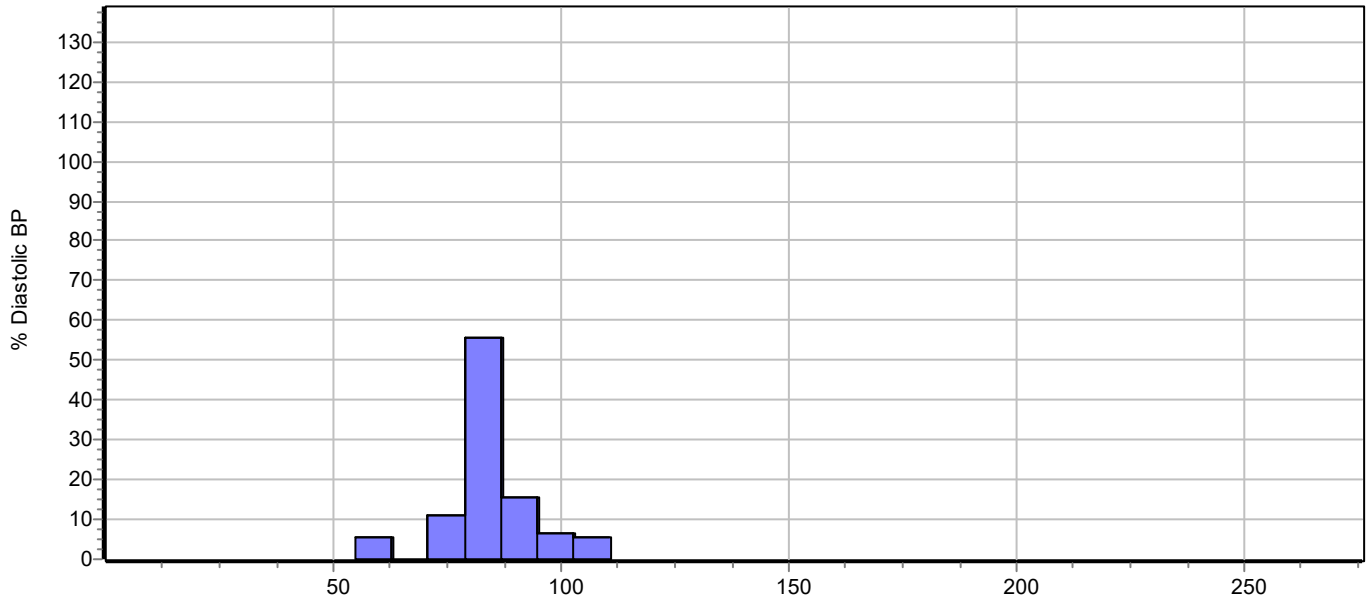
DIA (night)

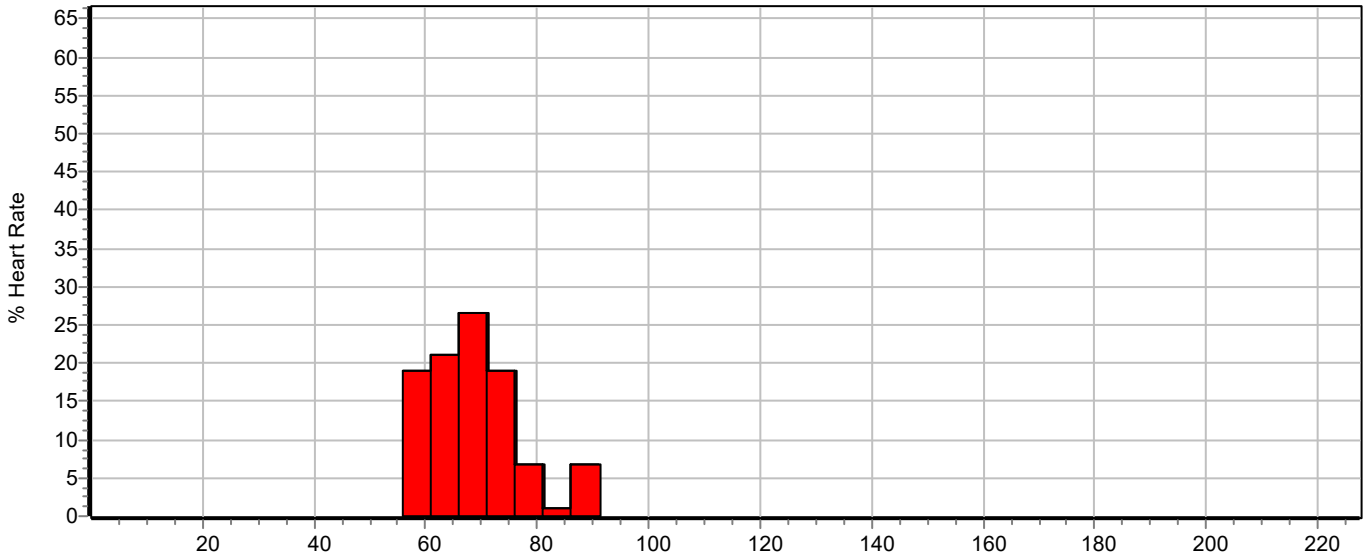
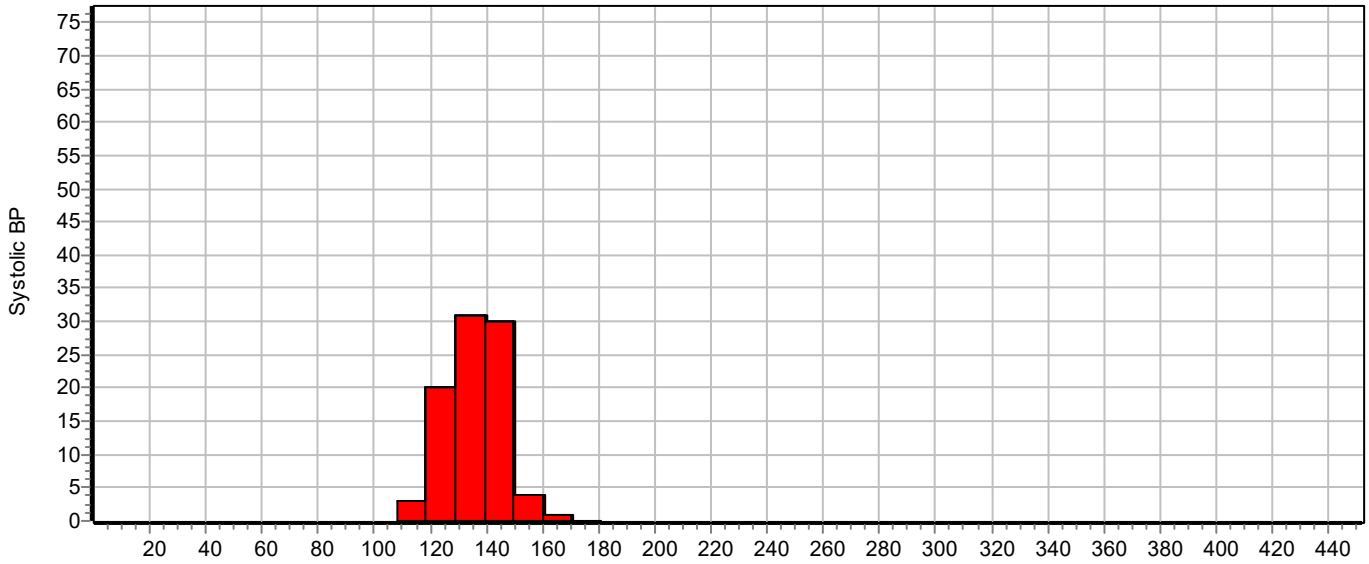
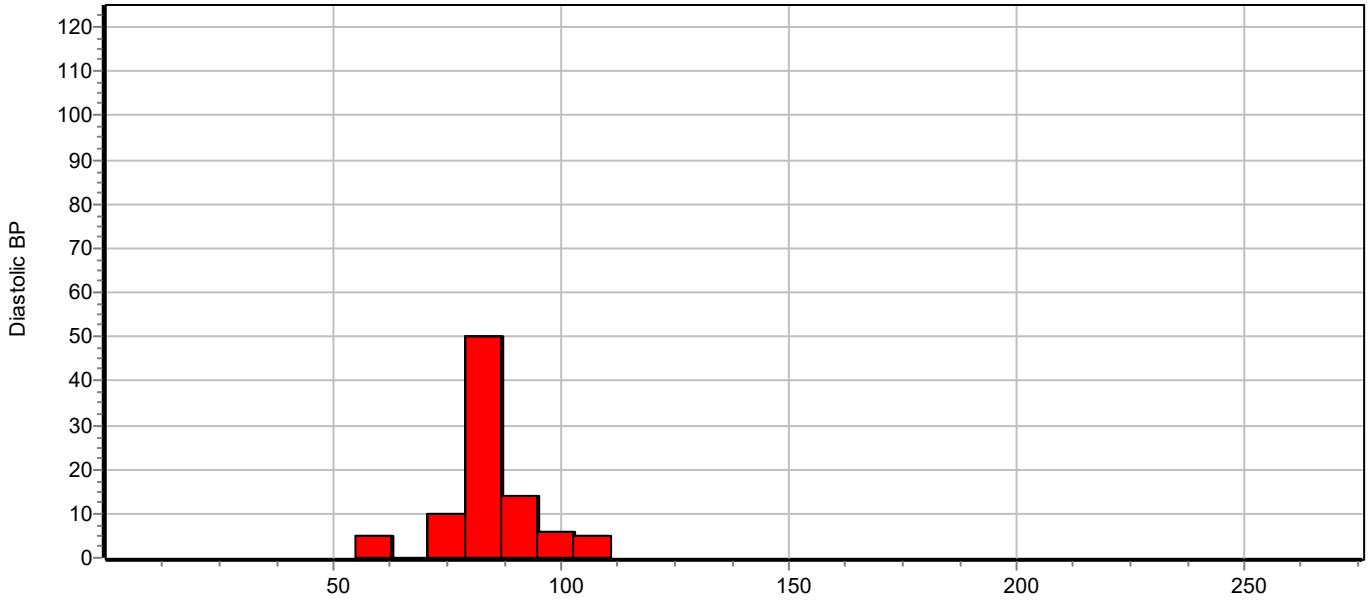
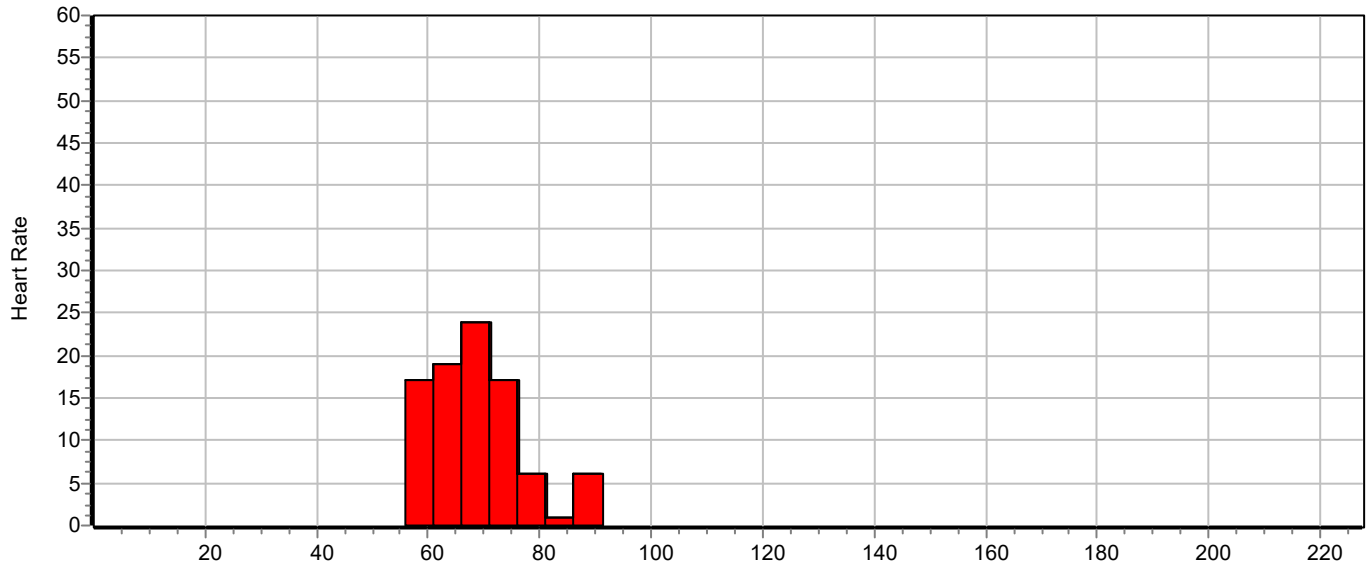


DIA (total)

Histogram (procents)







Histogram (absolute)