

XII CURSO DE POSTGRADO DE DIABETES DE LA SEEP **XXI JORNADA** DE DIABETES EN EL NIÑO Y EL ADOLESCENTE

GRUPO DE TRABAJO DE DIABETES

Madrid, 9 de marzo de 2018

Talleres simultáneos

TERAPIA CON INFUSOR SUBCUTÁNEO CONTINUO DE INSULINA

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Servicio de Pediatría

Hospital General Universitario - Alicante

Objetivos

- Taller práctico – Experiencia del grupo
- Revisar indicaciones ISCI en pediatría
- Selección de candidatos a terapia con isci
- Indicaciones y Selección de candidatos ISCI – MCG (terapia integrada)

Una pequeña encuesta...

- A cuantos pacientes con DM1 seguís de forma aproximada?
 - Quién Menos de 50?
 - Quién De 50 a 100?
 - Quién Más de 100?
- De estos pacientes:
 - **Quién tiene** pacientes menores de 6 años a los que es difícil ajustar terapia con tendencia a la **hipoglucemia**?
 - **Quién tiene** problemas para que sus pacientes **administren bolos para corregir hiperglucemia o para snacks fuera del horario habitual**?
 - No podrían beneficiarse estos de terapia con ISCI?
 - La llevan?
- ¿Cuántos lleváis en consulta pacientes en tratamiento con ISCI?
- De estos,
 - Cuántos seguís a menos de 10 pacientes con esta terapia?
 - Cuántos a más de 15 pacientes con esta terapia?



- Angela es una niña de 7 años remitida para tratamiento con ISCI en 2009.
- DM1 diagnosticada a los 3 años.
- Indicación ISCI: pérdida de calidad de vida + Hipoglucemias nocturnas.
- No episodios de cetoacidosis desde el diagnóstico, 2 episodios de hipoglucemia grave nocturna en 2008.
- AF: Padre con DM1.

Evaluación previa a terapia ISCI

- Está optimizada la terapia MDI?
 - Controles de glucemia / día
 - Contabilizan de forma adecuada alimentación
 - Ajuste de insulina según glucemia y raciones
- Ajustes de ratio UI/rac HC (en cuantas comidas administra insulina?)
- Ajustes de sensibilidad por tramo horario
- Se ha intentado ajuste de basal:
 - Cambio de horario
 - Cambio de tipo de basal
- Cómo repercute esto en la calidad de vida: se emplean test de calidad de vida en tu unidad?

Ángela a los 7 años:

Remitida para valoración con ISCI, a los 7 años.

Insulina:

50%

1 ui/kg/día

Glargina 13 ui a las 24 horas.

3 ui de Glulisina en desayuno; 3 - 4 en comida, 2 merienda, 2-3 cena.

Corrección sensibilidad 80 mg/dl/ui.

Alimentación:

Des: 3 rac de HC; Alm: 1,5; comida 5, mer 2 y 4 en cena.

Come en casa y, a veces, en el comedor.

Recena si menor de 150 mg/dl.

Controles glucemia:

6 – 7 GC /día.

Percibe hipoglucemias < 60 mg/dl y se despierta durante la noche.

Actividad física: diaria (3 días antes del almuerzo; un día antes de la merienda), bici, danza (viernes). Ajustan insulina para evitar hipoglucemias.

Autónoma en la administración de insulina.

Glucosa

A1c estimado **6,7% o 50 mmol/mol**

GLUCOSA PROMEDIO

147 mg/dL

% por encima del objetivo

25 %

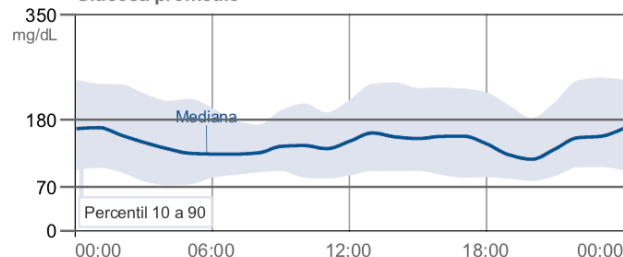
% en el objetivo

73 %

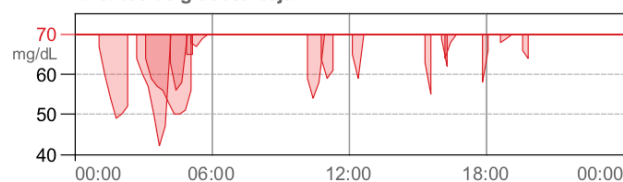
% por debajo del objetivo

2 %

Glucosa promedio



Eventos de glucosa baja



EVENTOS DE GLUCOSA BAJA

15

Duración promedio

57 Min

Uso del sensor

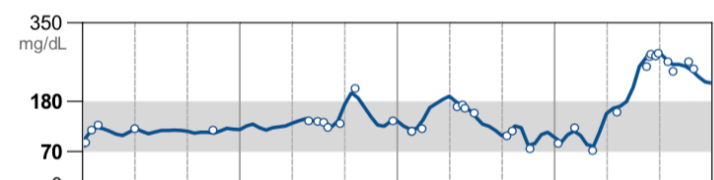
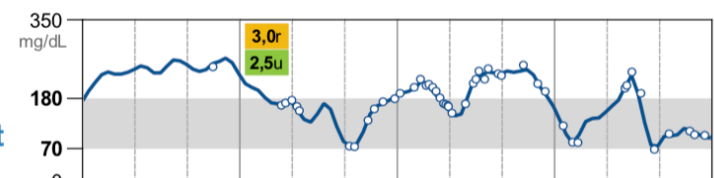
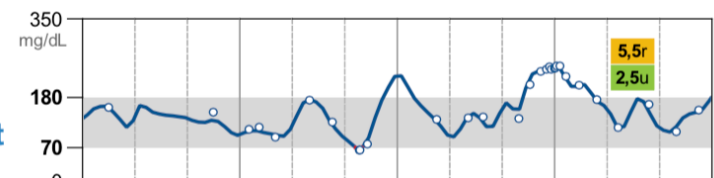
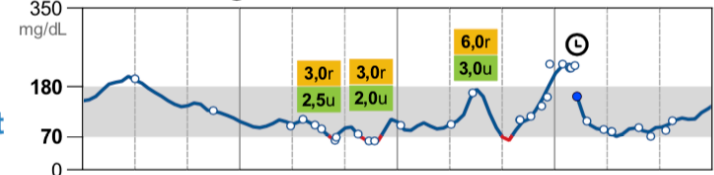
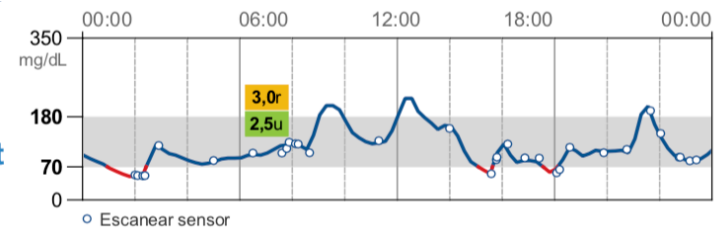
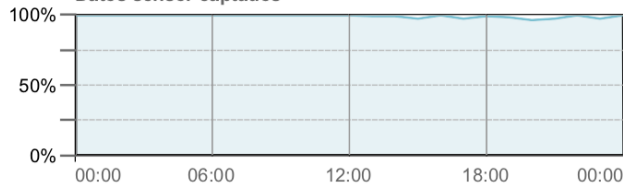
DATOS SENSOR CAPTADOS

100 %

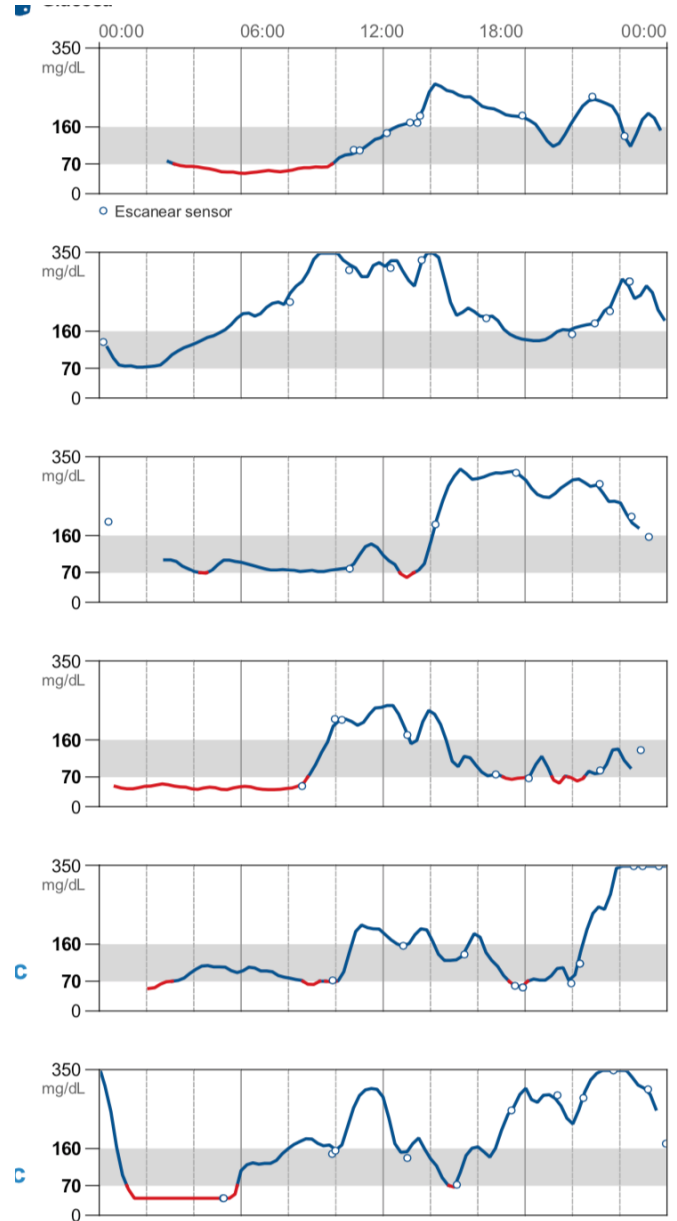
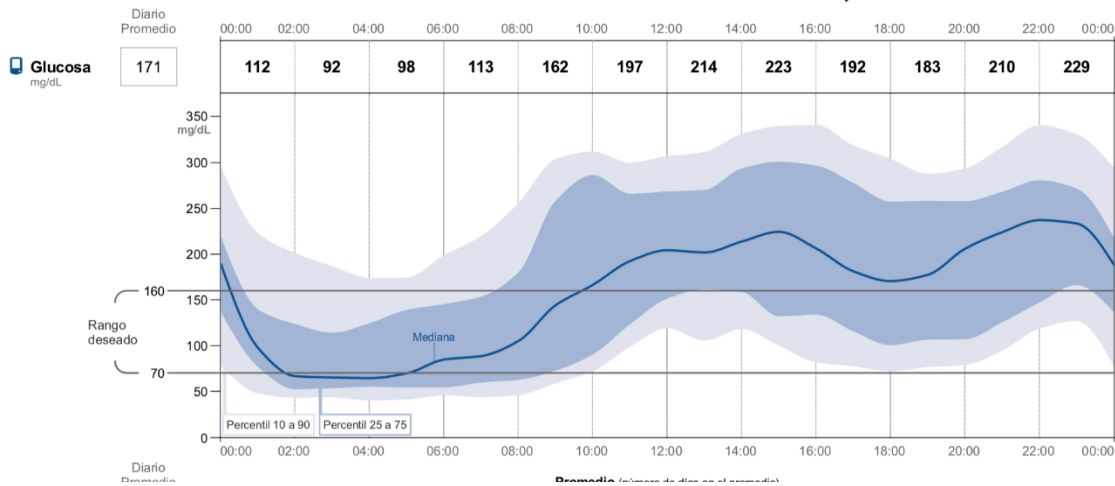
Lecturas por día

32

Datos sensor captados



Pero... y si fuese este?



Se decide iniciar terapia ISCI a los 8 años:

- Cómo ajustaría la terapia?
 - Reduciría un % de insulina, de cuál?
 - Qué ratio UI/rac HC utilizaría?
 - Cómo distribuiría la basal?
- Realizará MCG previa al inicio de la terapia con ISCI?
- Qué controles de glucemia solicitará en los siguientes días.
 - Cómo ajusta bolo?
 - Cómo ajusta basal?
 - Cómo ajusta sensibilidad?

Table 2
Insulin Requirements, Basal Percentages, I/C-PF and ISF-PF, and Target Blood Sugars^a

Group	TDD (U/kg/day)	Basal/TDD (%)	I/C-PF	ISF-PF	Target BS (day) (mg/dL)	Target BS (night) ^b (mg/dL)
1 ^c	.69 ± .05	34.3 ± 7.7	315.7 ± 79.4	2,588.3 ± 1,101.8	151 ± 21.0	154.5 ± 18.5
2 ^d	.74 ± .09	40.9 ± 6.0	448.6 ± 87.0	2,290.5 ± 468.1	135.5 ± 17.4	140.9 ± 215.7
3 ^e	.82 ± .19	45.2 ± 7.7	517.5 ± 115.6	2,396.1 ± 600.9	138.9 ± 13.6	144.4 ± 8.8
4 ^f	.75 ± .12	42.6 ± 6.6	483.8 ± 46.9	2,044.8 ± 294.1	131.7 ± 21.4	135.0 ± 25.9
5 ^g	.97 ± .16	41.6 ± 6.5	504.9 ± 86.7	2,399.8 ± 526.1	126.9 ± 13.1	127.4 ± 13.4
6 ^h	.82 ± .11	38.6 ± 8.1	489.5 ± 60.6	2,663.8 ± 1,013.6	118.9 ± 7.8	121.11 ± 10.5
7 ⁱ	.83 ± .18	45.2 ± 5.7	498.4 ± 88.3	1,913.4 ± 470.1	118.4 ± 20.0	122.3 ± 13.0
8 ^j	.90 ± .13	40.6 ± 4.5	575.2 ± 86.7	1,831.8 ± 322.3	121.9 ± 5.3	126.9 ± 11.9

Abbreviations: BS = blood sugar; I/C = insulin to carbohydrate ratio; ISF = insulin sensitivity factor; PF = prediction factor; TDD = total daily dose.

^a All values are the mean ± SD.

^b From bedtime to 6-8 am.

^c Group 1: <7 years of age, prepubertal.

^d Group 2: 7-13 years of age and prepubertal.

^e Group 3: females in early puberty (stage 2).

^f Group 4: males in early puberty (stage 2).

^g Group 5: females in midpuberty (stage 3-4, no menarche).

^h Group 6: males in midpuberty (stage 3-4).

ⁱ Group 7: postpubertal females (stage 4-5, menarche present).

^j Group 8: postpubertal males (stage 5).

Basal and Bolus Insulin Requirements in Children, Adolescents, and Young Adults with Type 1 Diabetes Mellitus on Continuous Subcutaneous Insulin Infusion (CSII): Effects of Age and Puberty

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¹ Spectrum Health Medical Group, Pediatric Endocrinology and Diabetes Clinic, Helen DeVos Children's Hospital

² Spectrum Health, Grand Rapids, Michigan

³ Grand Rapids Medical Education Partners (GRMEP), Grand Rapids, Michigan

CSII Settings in Children With T1DM, *Endocr Pract.* 2013;19(No. 5)

Ángela

Edad 8 años, Tanner 1

Raciones:	Lacteos	Proteinas	Verdura	Harinas	Fruta	Grasas
Desayuno	1			2		1
Almuerzo					1	
Comida		2	1	3	1	1
Merienda		1		3		
Cena		2	1	2	1	1
Recena						

		Z Score
Peso:	26,4	-0,34
Talla:	123	-1,04
IMC:	17,45	0,11

Insulina:

Glargina: 13 ui en comida

Lispro: 4 – 1 – 3 – 3 - 3

Ángela, cálculos iniciales:

Bolo y Basal					Pauta Alternativa	Formación
Bolo	UI/R HC					
	Hora	UI / Rac	HC/UI	Bolo	Sensibilidad Teórica por tramo	
Nocturna	0:00	1,00	10,0		60	
Desayuno	7:00	1,40	7,1	4,20	82	
Almuerzo	9:30	0,95	10,5	0,95	90	
Comida	13:00	0,75	13,3	3,00	100	
Merienda	16:30	1,00	10,0	3,00	82	
Cena	19:30	1,00	10,0	3,00	75	
					60	
Factor de Corrección:						
Inicio	Prog					
0:00	60	Objetivo de glucemia				
2:00	80	Inicio	Prog			
7:00	60	0	70 - 120			
9:30	90	7	70 - 110			
16:30	75	Duración de Insulina				
		3				

Basal 1	Basal 2	Basal 3	Basal 4	Basal 5
Estandar				
Desde:	Hasta:	Ritmo:		
0:00	2:00	0,900		
2:00	6:00	0,500		
6:00	10:00	0,400		
10:00	13:30	0,300		
13:30	17:00	0,500		
17:00	22:00	0,600		
22:00	24:00	0,900		
Suma Basal			13,000	

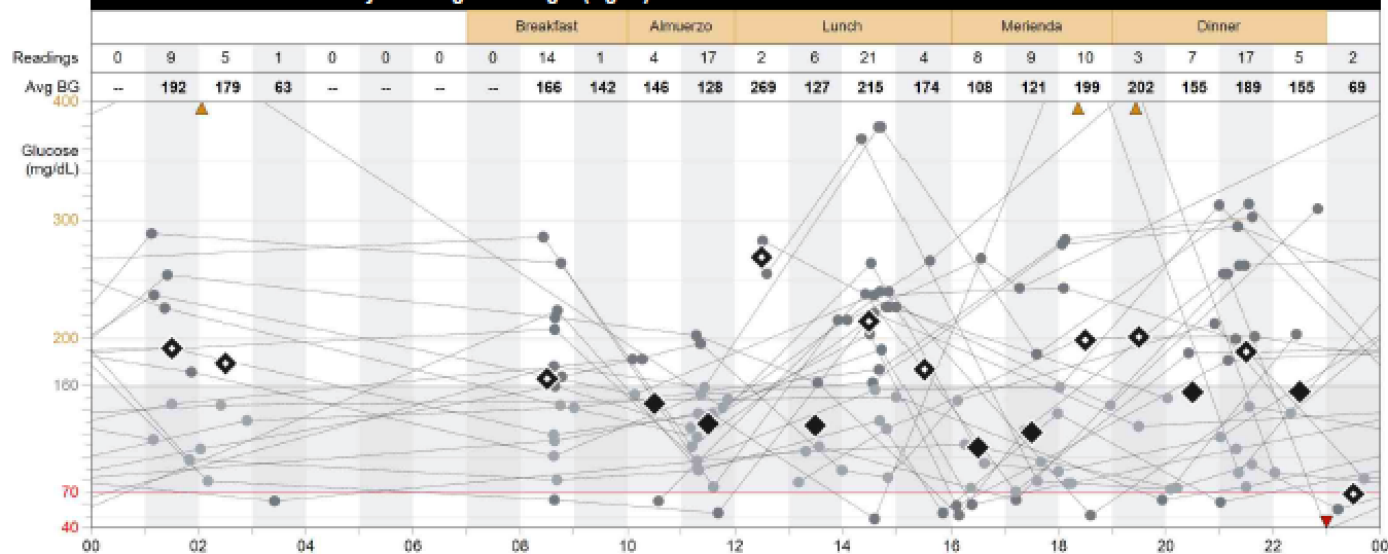
Ángela

7 meses tras inicio de terapia con ISCI

	Glucose Measurements		Bolus Events					Fill Events					
	BG Readings	Sensor Duration (h:mm)	Manual Boluses	Bolus Wizard Events	With Food	With Correction	Overridden	Rewind	Cannula Fills	Cannula Amount (U)	Tubing Fills	Tubing Amount (U)	
martes 26/09/2017	7			7	7	3							
miércoles 27/09/2017	9			9	7	5							
jueves 28/09/2017	7			8	7	3							
viernes 29/09/2017	6			10	7	5							
sábado 30/09/2017	5			6	4	3			1	0,7			0:01 
domingo 01/10/2017	7			8	8			1			1	10,6088	0:05 
lunes 02/10/2017	6			6	5	5							
martes 03/10/2017	7			7	7	1							
miércoles 04/10/2017	7			7	6	3							
jueves 05/10/2017	5			7	7	4			1	0,7			0:01 
viernes 06/10/2017	5			7	7	2							
sábado 07/10/2017	6			9	8	4	1						
domingo 08/10/2017	5			7	6	3			1	0,7			0:01 
lunes 09/10/2017	4			4	4	3		1			1	9,4926	0:03 
Summary	6,1/day	0m	0,0/day	7,3/day	88,2%	43,1%	1,0%	2	3	0,7U /fill	2	10,1U/fill	11m

	Glucose Measurements		Bolus Events					Fill Events					Suspend Duration (h:mm)
	BG Readings	Sensor Duration (h:mm)	Manual Boluses	Bolus Wizard Events	With Food	With Correction	Overridden	Rewind	Cannula Fills	Cannula Amount (U)	Tubing Fills	Tubing Amount (U)	
martes 10/10/2017	6			5	4	3							
miércoles 11/10/2017	7			10	7	5							
jueves 12/10/2017	5			8	6	3			1	0,7			0:01 
viernes 13/10/2017	3			8	7	2							
sábado 14/10/2017	4			6	5	3							
domingo 15/10/2017	5			6	5	1		1	1	0,7	1	9,5387	0:03 
lunes 16/10/2017	6			7	6	5							
martes 17/10/2017	7			8	7	2							
miércoles 18/10/2017	6			8	7	3			1	0,7			0:01 
jueves 19/10/2017	7			9	9	3							
viernes 20/10/2017	3			3	1	3							

24-Hour Meter Glucose Overlay - Readings & Averages (mg/dL)



Statistics 26/09 - 23/10

Avg BG (mg/dL)	167 ± 88	
BG Readings	145	5,9/day
Readings Above Target	64	44%
Readings Below Target	15	10%
Sensor Avg (mg/dL)	--	
Avg AUC > 160 (mg/dL)	--	
Avg AUC < 70 (mg/dL)	--	

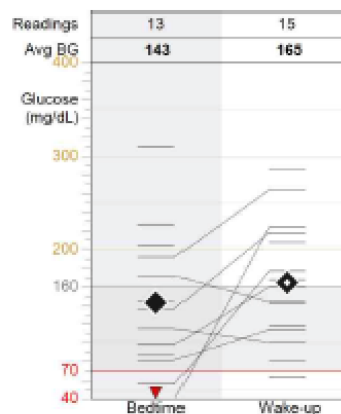
Avg Daily Carbs (ex)	14,0 ± 2,6	
Bolus Insulin/Carbs (U/ex)	1,3	

Avg Total Daily Insulin (U)	32,50 ± 4,0	
Avg Daily Basal (U)	13,91	43%
Avg Daily Bolus (U)	18,59	57%

Meter Glucose Overlay Bedtime to Wake-Up and Meal Periods - Readings & Averages (mg/dL)

Bedtime to Wake-up

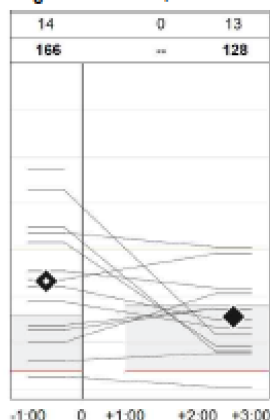
Bedtime: 22:00 - 02:00
Wake-up: 07:00 - 10:00



Breakfast: 07:00 - 10:00

Meals Analyzed: 14

Avg Carbs: 1,5ex
Avg Insulin: 3,0U
Avg Insulin/Carbs: 2,0U/ex



Almuerzo: 10:00 - 12:00

Meals Analyzed: 19

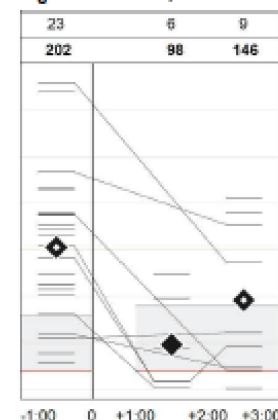
Avg Carbs: 2,5ex
Avg Insulin: 2,2U
Avg Insulin/Carbs: 0,9U/ex



Lunch: 12:00 - 16:00

Meals Analyzed: 29

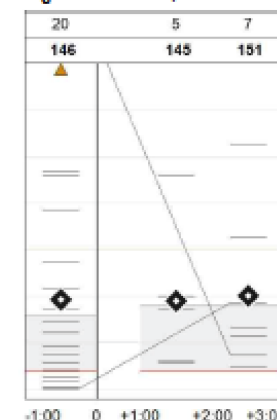
Avg Carbs: 2,0ex
Avg Insulin: 3,7U
Avg Insulin/Carbs: 1,3U/ex



Merienda: 16:00 - 19:00

Meals Analyzed: 30

Avg Carbs: 1,8ex
Avg Insulin: 2,6U
Avg Insulin/Carbs: 1,4U/ex



Dinner: 19:00 - 23:00

Meals Analyzed: 30

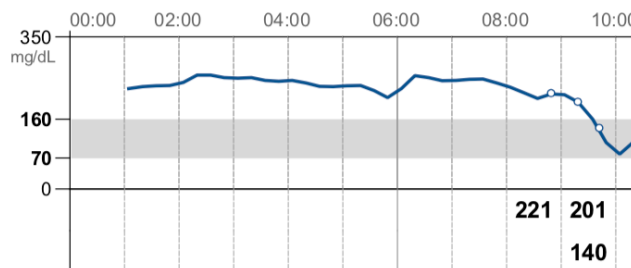
Avg Carbs: 2,4ex
Avg Insulin: 2,7U
Avg Insulin/Carbs: 1,1U/ex



Ajustes de Basal nocturna...

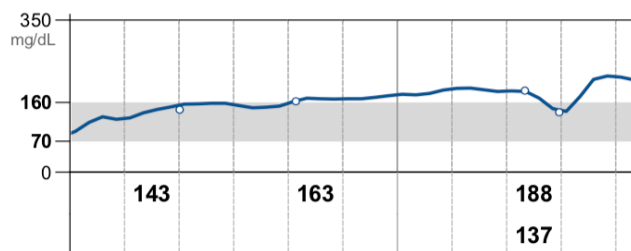
sáb 29 de jul

 **Glucosa**
mg/dL



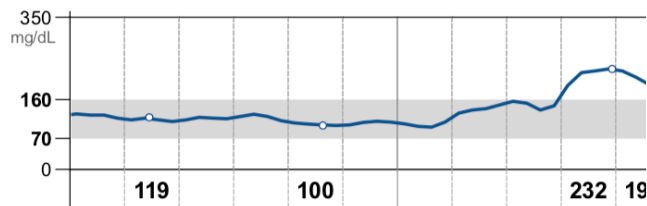
dom 30 de jul

 **Glucosa**
mg/dL

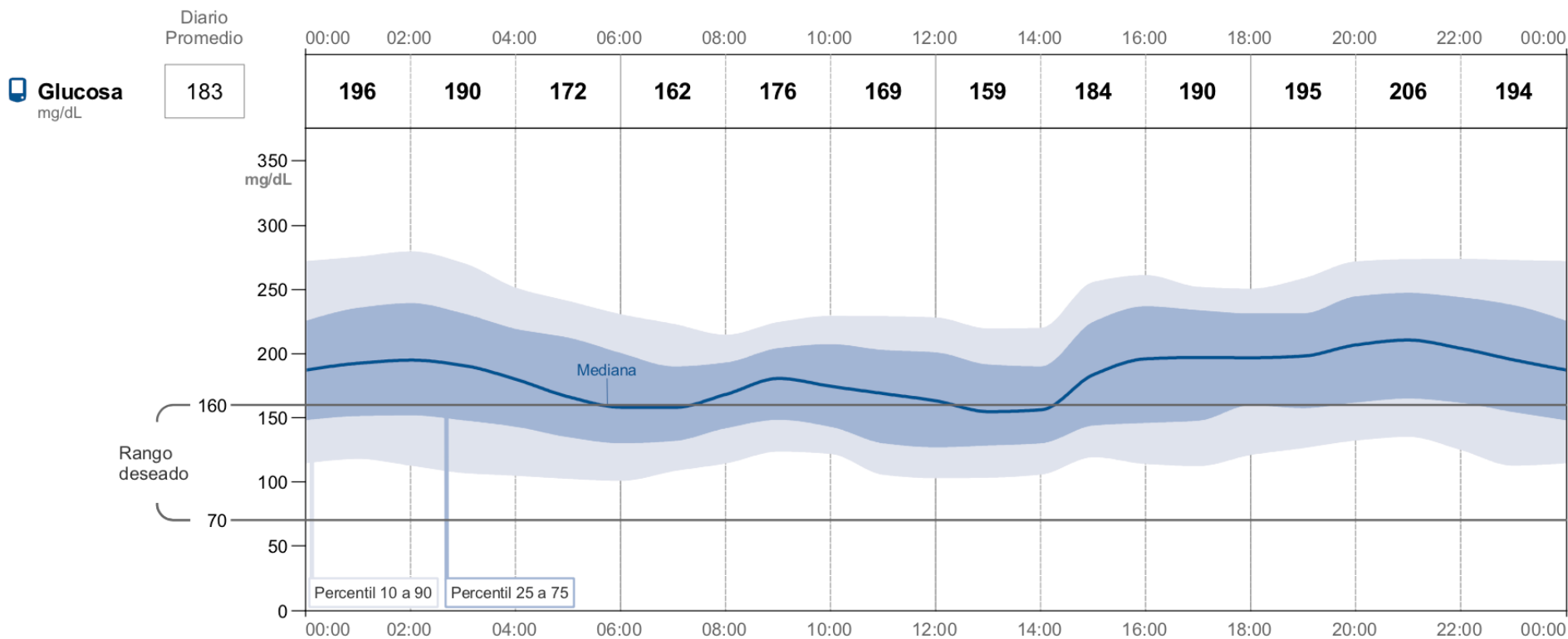


lun 31 de jul

 **Glucosa**
mg/dL

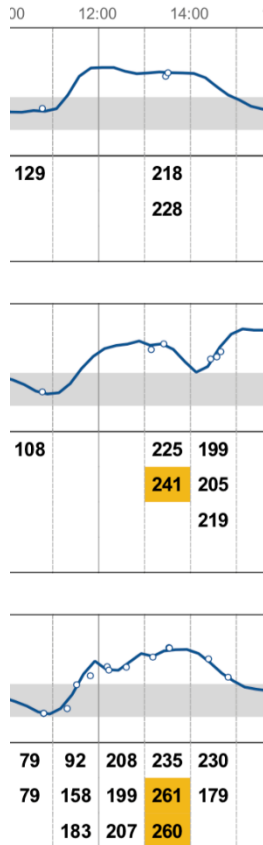


Poca variabilidad con media elevada...

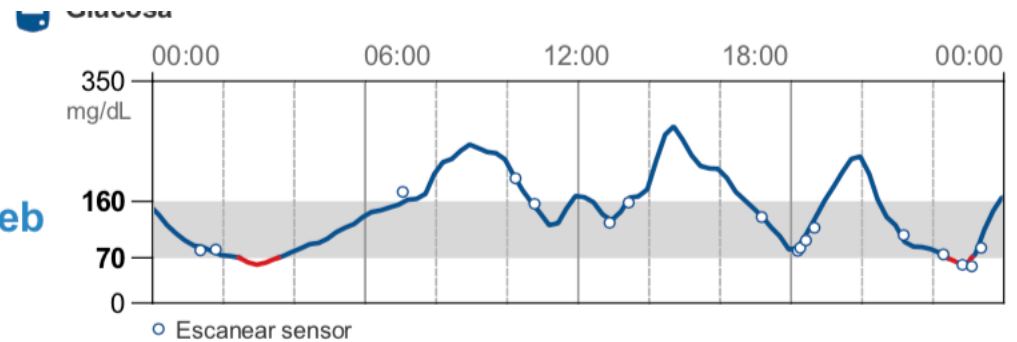


Ajuste de Ratio UI /ración de HC

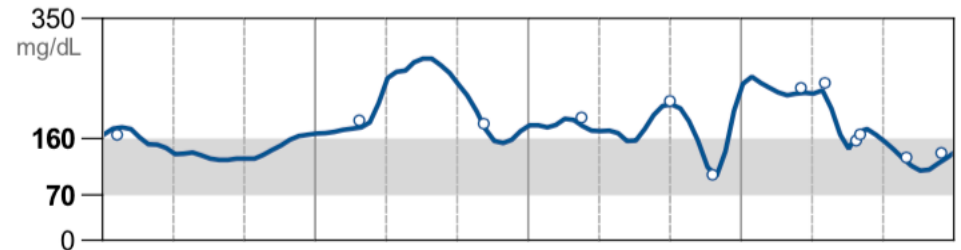
No confundir con ajuste de tiempo!!



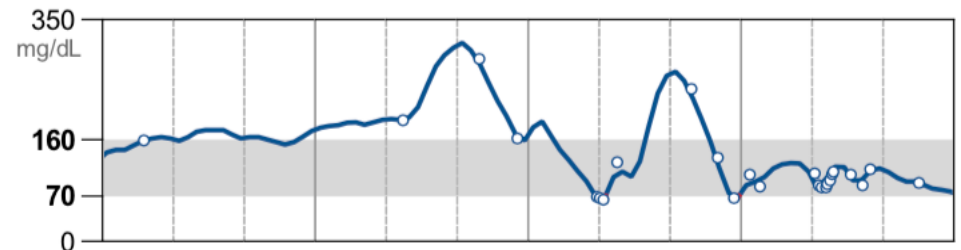
jue
11 de feb



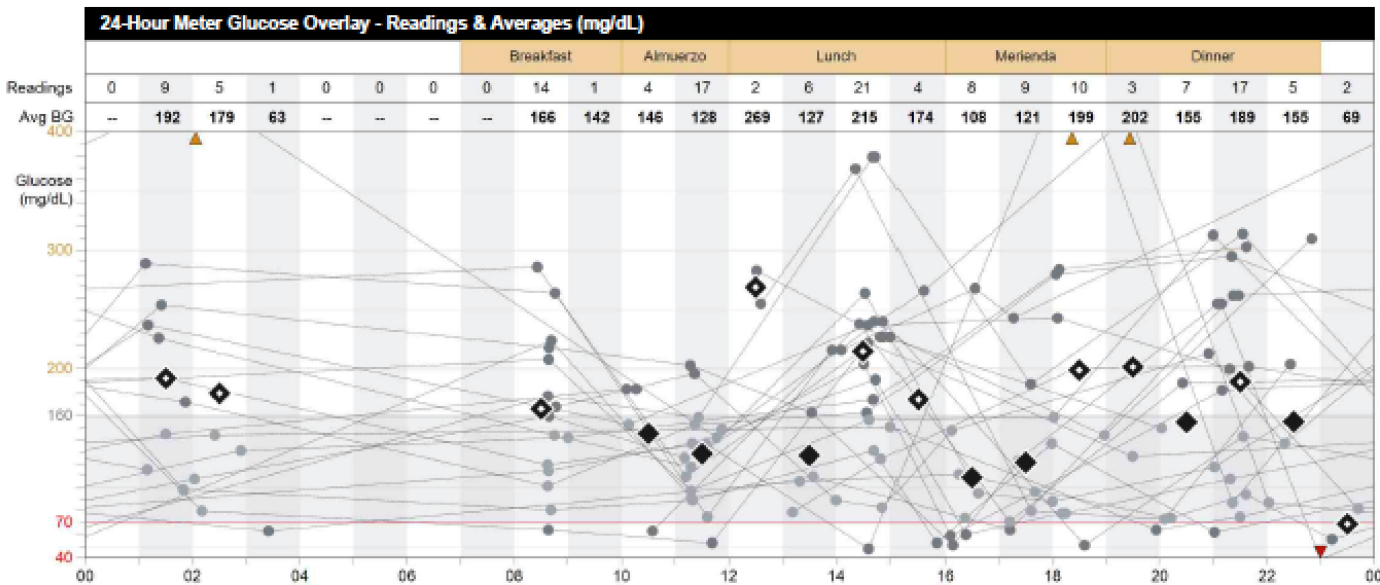
vie
12 de feb



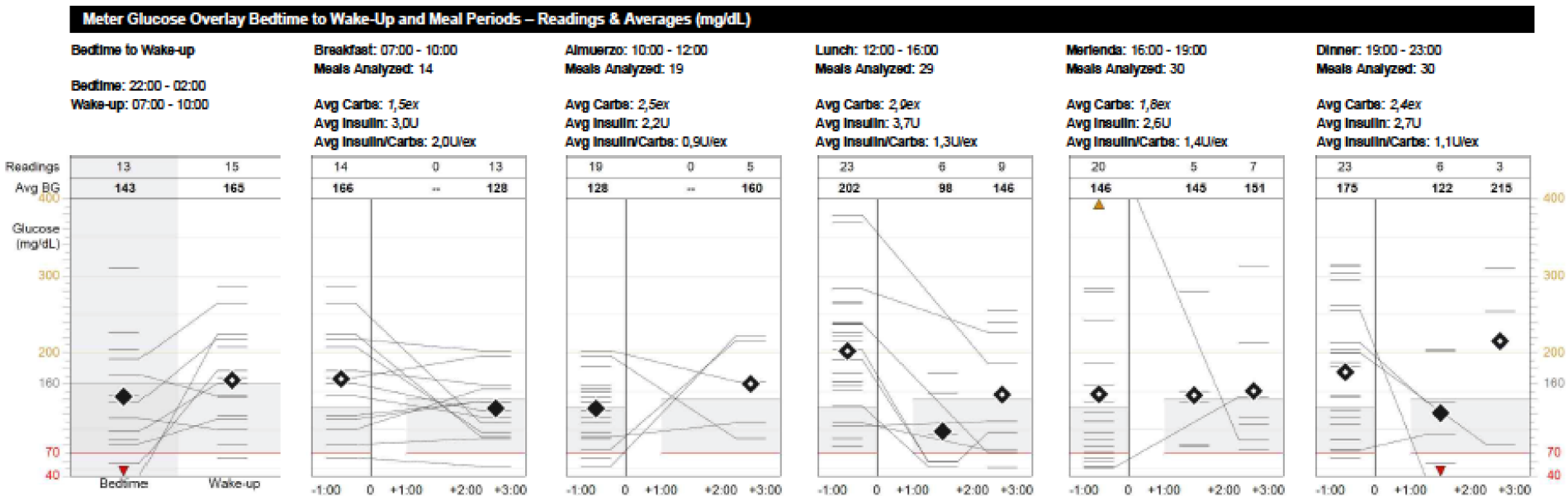
sáb
13 de feb



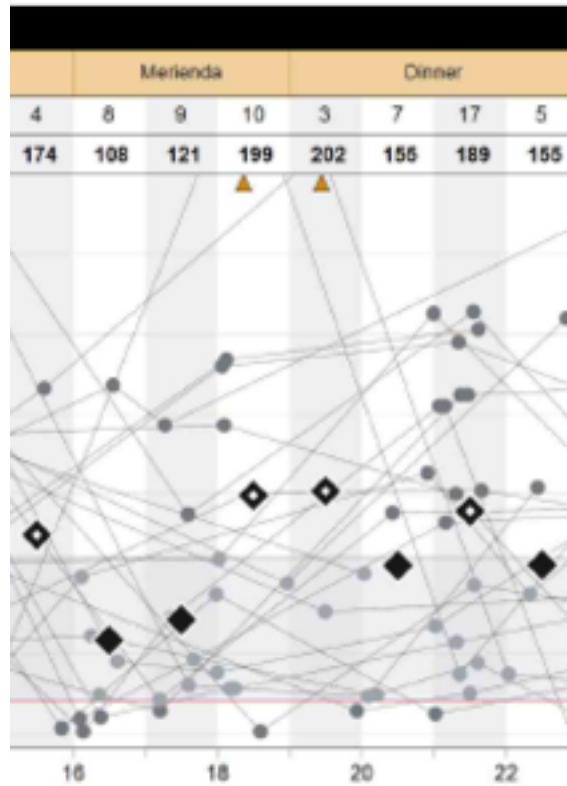
Ajuste de Sensibilidad... Antes, **valorar ajuste de ratio!!**



Statistics		26/09 - 23/10	
Avg BG (mg/dL)		167 ± 88	
BG Readings		145	5,9/day
Readings Above Target		64	44%
Readings Below Target		15	10%
Sensor Avg (mg/dL)		--	
Avg AUC > 160 (mg/dL)		--	
Avg AUC < 70 (mg/dL)		--	
Avg Daily Carbs (ex)		14,0 ± 2,6	
Bolus Insulin/Carbs (U/ex)		1,3	
Avg Total Daily Insulin (U)		32,50 ± 4,0	
Avg Daily Basal (U)		13,91	43%
Avg Daily Bolus (U)		18,59	57%



Y si en un tramo hay mucha variabilidad...



Estará fallando el conteo de raciones?

Para estos alimentos habría que administrar insulina?

< Buscar Almendra, frita, salada

2.3g
HDC

28.1g
grasas

9.5g
proteínas



ALMENDRA, FRITA, SALADA

50 g - 298 Kcal

2x

< Buscar Hamburguesa de buey

3.6g
HDC

21.3g
grasas

26.3g
proteínas



HAMBURGUESA DE BUEY

152 g - 312 Kcal

2x

< Buscar Queso curado, genérico

0.2g
HDC

16.3g
grasas

17.2g
proteínas



QUESO CURADO, GENÉR

48 g - 216 Kcal

< Buscar Salchicha Babiera

0g
HDC

16.2g
grasas

0g
proteínas



SALCHICHA BABIERA

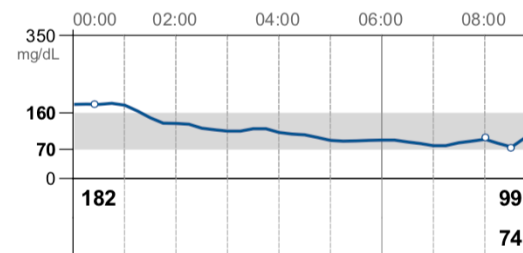
100 g - 205 Kcal

2x

Cuando hay una tendencia más o menos estable durante la noche, ¿Qué puede hacer que cambie sin más explicación?

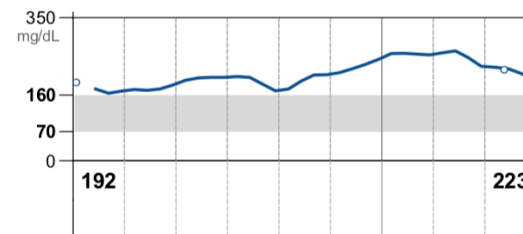
vie 23 de feb

Glucosa
mg/dL



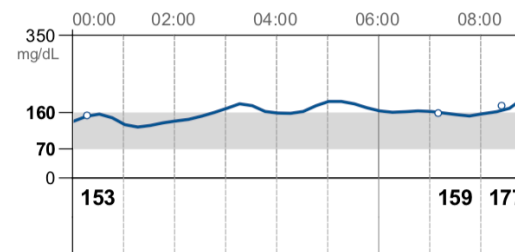
sáb 24 de feb

Glucosa
mg/dL



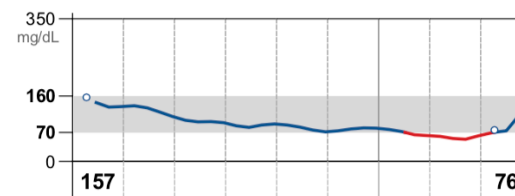
lun 26 de feb

Glucosa
mg/dL



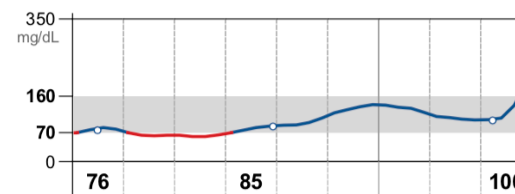
mar 27 de feb

Glucosa
mg/dL



mié 28 de feb

Glucosa
mg/dL



Sin bolo dual

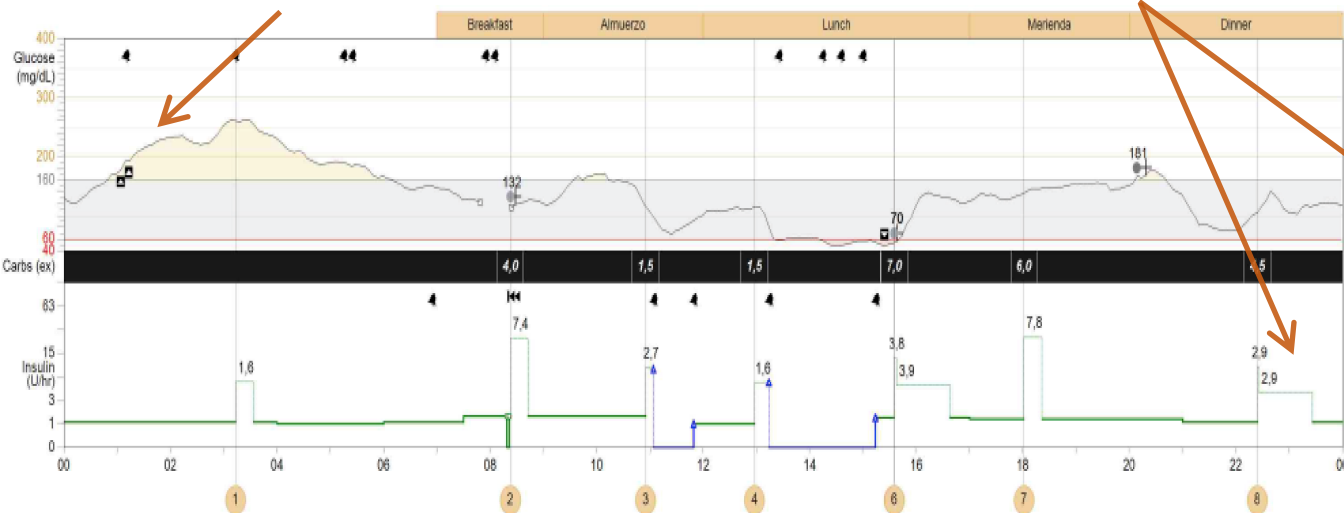


Bolus Events									
Bolus Event	1	2	3	4	5	6	7		
Time	07:03	11:15	12:44	17:00	17:29	18:11	20:13		
Bolus Type	Normal	Normal	Dual	Normal	Normal	Normal	Normal		
Delivered Bolus Norm (U)	5,40	3,50	3,30	2,00	1,00	2,60	3,20		
+ Square Portion (U, h:mm)	--	--	3,30, 1:00	--	--	--	--		
Recommended Bolus (U)	5,40	3,50	6,60	--	--	--	3,20		
Difference (U)	--	--	--	--	--	--	--		
Carbs (ex)	3,0	3,5	6,0	--	--	--	2,5		
Carb Ratio Setting (U/ex)	1,8	1,0	1,1	--	--	--	1,3		
Food Bolus (U)	5,40	3,50	6,60	--	--	--	3,20		
BG (mg/dL)	124	--	--	--	--	--	--		
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120	--	--	--	70 - 120		
Insulin Sensitivity Setting (mg/dL per U)	60	60	60	--	--	--	60		
Correction Bolus (U)	--	--	--	--	--	--	--		
Active Insulin (U)	--	--	1,50	--	1,90	2,10	0,700		

Statistics	27/01		16/01 - 01/02	
Avg BG (mg/dL)	108		137 ± 73	
BG Readings	2		49	2,9/day
Readings Above Target	—	0%	11	22%
Readings Below Target	—	0%	—	0%
Sensor Avg (mg/dL)	144 ± 53		133 ± 47	
Avg AUC > 160 (mg/dL)	16,5	0d 22h	9,8	14d 20h
Avg AUC < 60 (mg/dL)	0,0	0d 22h	0,1	14d 20h
Daily Carbs (ex)	15,0		21,6 ± 4,7	
Bolus Insulin/Carbs (U/ex)	1,6		1,4	
Total Daily Insulin (U)	48,80		53,93 ± 6,4	
Daily Basal (U)	24,50	50%	24,71	46%
Daily Bolus (U)	24,30	50%	29,21	54%
Fills	—	—	8	46,998U

Sin bolo Dual/cuadrado

Con bolo Dual/cuadrado



Bolus Events									
Bolus Event	1	2	3	4	5	6	7	8	
Time	03:13	08:22	10:56	12:57	15:34	15:35	18:01	22:24	
Bolus Type	Normal	Normal	Normal	Normal	--	Dual	Normal	Dual	
Delivered Bolus Norm (U)	1,80	7,40	2,70	1,80	--	3,80	7,80	2,90	
+ Square Portion (U, h:mm)	--	--	--	--	--	3,90, 1:00	--	2,90, 1:00	
Recommended Bolus (U)	--	7,40	2,70	1,80	8,20	7,70	7,80	5,80	
Difference (U)	--	--	--	--	-8,200	--	--	--	
Carbs (ex)	--	4,0	1,5	1,5	7,5	7,0	6,0	4,5	
Carb Ratio Setting (U/ex)	--	1,8	1,8	1,1	1,1	1,1	1,3	1,3	
Food Bolus (U)	--	7,20	2,70	1,80	8,20	7,70	7,80	5,80	
BG (mg/dL)	--	132	--	--	70	70	--	--	
BG Target Setting (mg/dL)	--	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120	
Insulin Sensitivity Setting (mg/dL per U)	--	60	60	60	60	60	60	60	
Correction Bolus (U)	--	0,200	--	--	--	--	--	--	
Active Insulin (U)	--	--	0,800	0,800	0,200	0,200	1,80	--	

Statistics		01/02	16/01 - 01/02
Avg BG (mg/dL)	113		137 ± 73
BG Readings	4		49 2,9/day
Readings Above Target	1	25%	11 22%
Readings Below Target	--	0%	-- 0%
Sensor Avg (mg/dL)	140 ± 51		133 ± 47
Avg AUC > 160 (mg/dL)	12,3	0d 24h	9,8 14d 20h
Avg AUC < 60 (mg/dL)	0,4	0d 24h	0,1 14d 20h

Daily Carbs (ex)	32,0	21,6 ± 4,7
Bolus Insulin/Carbs (U/ex)	1,1	1,4

Total Daily Insulin (U)	60,25	53,93 ± 6,4
Daily Basal (U)	25,85	43% 24,71 46%
Daily Bolus (U)	34,80	57% 29,21 54%
Fills	1	11,144U 8 46,998U

¿Cuál es la causa de las complicaciones micro vasculares en DM1?

¿Cuál es la principal barrera para conseguir un adecuado control metabólico, evitando la hiperglucemia?

El miedo a la HIPOGLUCEMIA

DOCUMENTO DE CONSENSO SED- SEEP SOBRE EL USO DE LA MCG EN ESPAÑA

21 de Febrero de

2017

- En niñas y niños con diabetes mellitus tipo 1 en terapia con ISCI y además:
 - 1) Mal control metabólico ($HbA1c > 8\%$).
 - 2) Hipoglucemia de repetición/desapercibida.
 - a) > 2 hipoglucemias graves/2 años y/o,
 - b) > 4 hipoglucemias leves/semana y/o,
 - c) $> 10\%$ de hipoglucemias en 10 autoanálisis/día.
- En adolescentes con diabetes mellitus tipo 1 en terapia ISCI y además:
 - 1) Mal control metabólico ($HbA1c > 8\%$)
 - 2) Hipoglucemia de repetición/desapercibida
 - a) > 2 hipoglucemias graves/2 años y/o,
 - b) > 4 hipoglucemias leves/semana y/o,
 - c) $> 10\%$ de hipoglucemias de 10 autoanálisis/día
 - 3) Control metabólico no óptimo ($HbA1c > 6,5\%$) antes y durante la gestación, pese a terapia con ISCI, refuerzo educativo y adherencia al tratamiento.

Caso 2

Sistema integrado

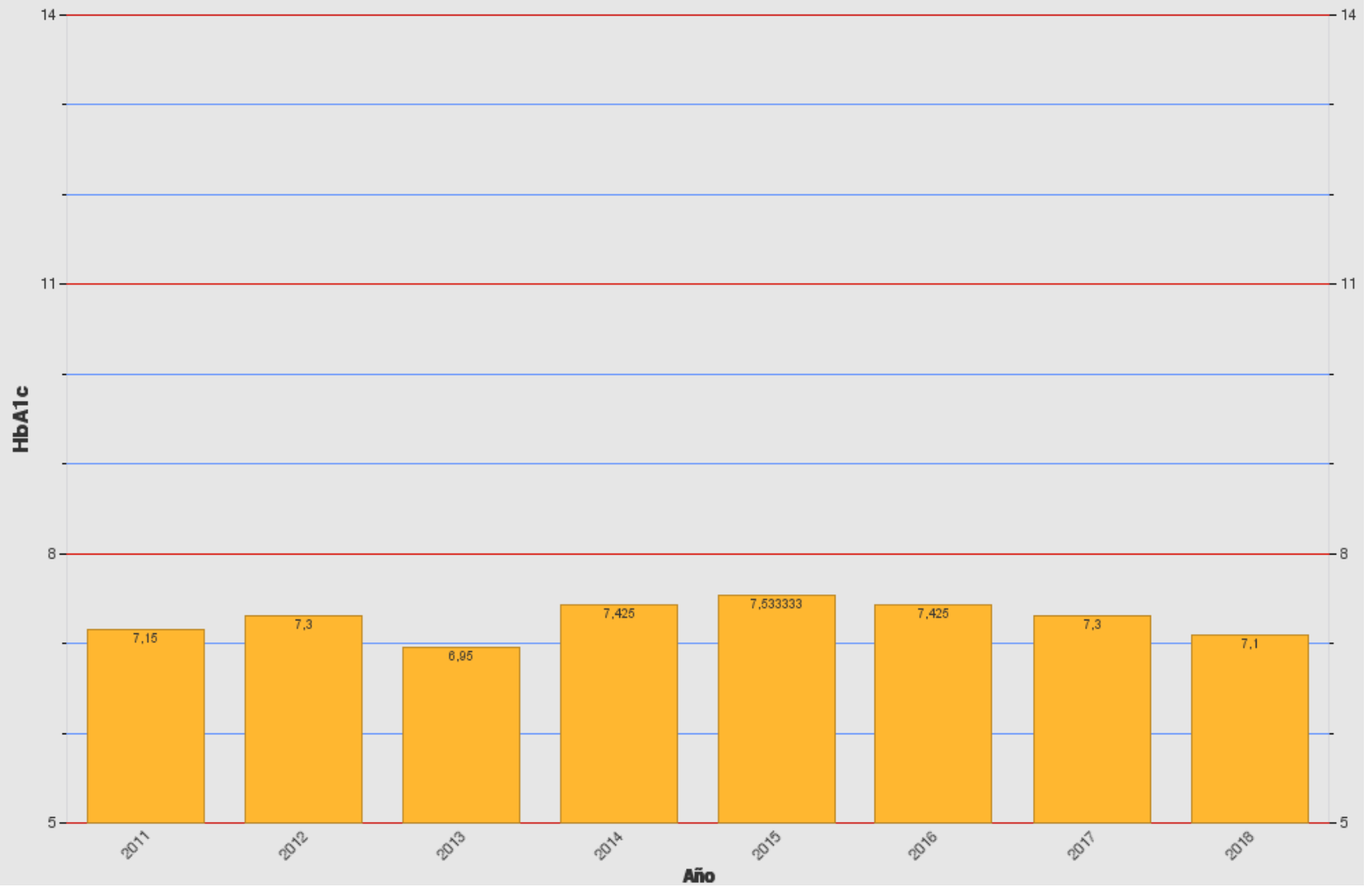
Nico

- Chico de 13 años con DM1 de 11 a y 7 meses de evolución.
- Tratamiento con ISCI: marzo 2007
- Sistema integrado: enero 2017
- Grado de control y Capacidad de ajuste de terapia: muy buenos
- No otras patologías asociadas a diabetes
- Reacción cutánea con adhesivo del sensor.



- **EXPLORACIÓN FÍSICA:** Peso: 56,8 kg (ZS: 0,61); Talla: 165,4 cm (ZS: 1); IMC: 20,76 (ZS: 0,18); T.A.: 108/60

Evolución HbA1c

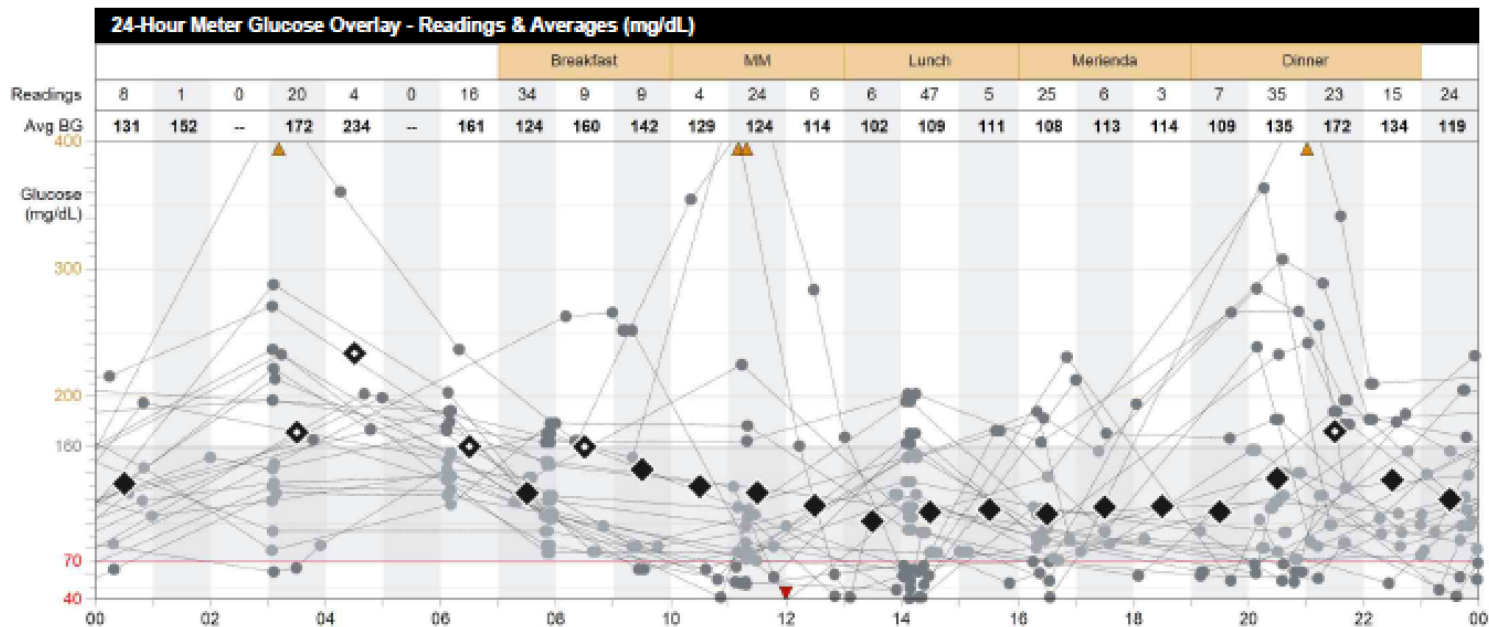


Actividad de Nico:

- Waterpolo:
 - Entrena 3 días/semana: 2 horas
 - Partidos sábados: 2,5 horas
- Bicicleta:
 - Domingos por la mañana 1 – 3 horas.
- PSP:
 - Vacaciones – Festivos durante “demasiado poco tiempo!!” que siempre termina hiperglucémico.
- En sus ratos libres:
 - Estudia 3º ESO con buen resultado académico, media de 9.

Previo a inicio de terapia integrada

- Hipoglucemias nocturnas de repetición, a pesar de DBT al 50% durante las noches tras entrenamiento, que llevó a reducción de basal nocturna...
- Frecuentes hipoglucemias durante el día, con sobre corrección e hiperglucemia posterior.
- Media de 10,5 controles de glucemia/día con un **17%** por debajo de objetivo



48 -----

488837

Data Source: IMIIMIEDU 0400, IMIIM1-1012/11/12 (N013930007)

Maximum Basal Rate	2.00 U/Hr
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Bolus

Bolus Wizard	On	Easy Bolus	Off
Units	ex, mg/dL	Bolus Increment	0,1 U
Active Insulin Time (h:mm)	3:00	Bolus Speed	Standard
Maximum Bolus	15,0 U	Dual/Square	On/On

Preset Bolus

Name	Normal	Square
Bolus 1		
Breakfast		
Dinner		
Lunch		
Snack		
Bolus 2		

Sensor On

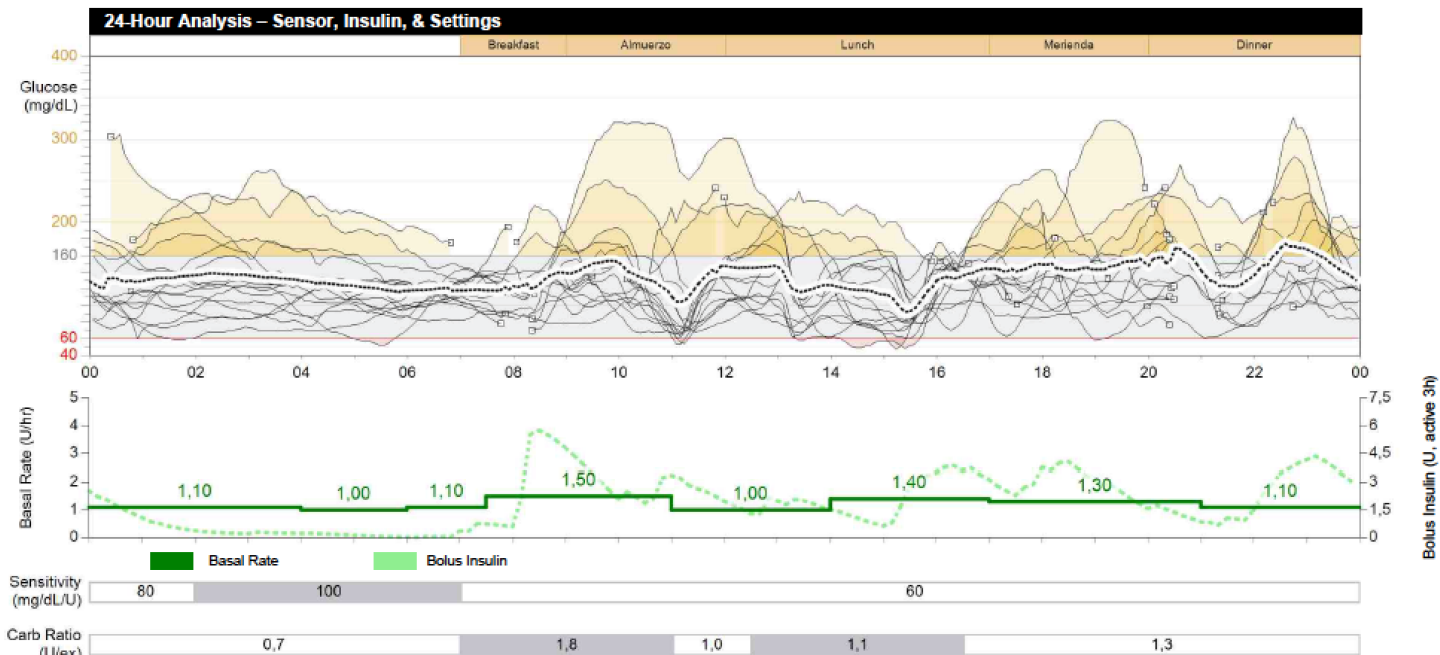
On (Snooze 2:00)

Low Alerts

On (Snooze 0:20)

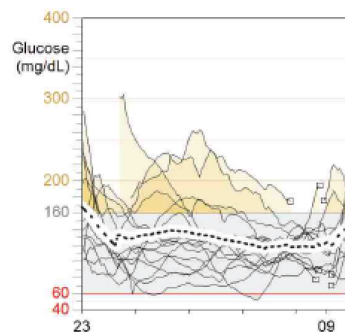
Start Time	Low (mg/dL)	Suspend	Alert On Low	Alert Before Low	Resume Basal Alert
0:00	70	Before Low	x		
7:00	60	Before Low	x		

Auto Calibration	Off
Calibration Reminder	On
Calibration Reminder Time	1:00



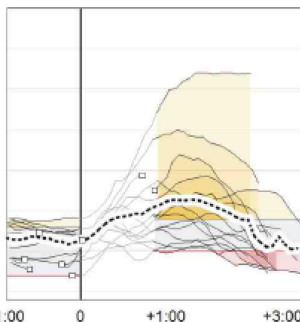
Bedtime to Wake-up

Bedtime: 23:00 - 02:00
Wake-up: 05:00 - 09:00



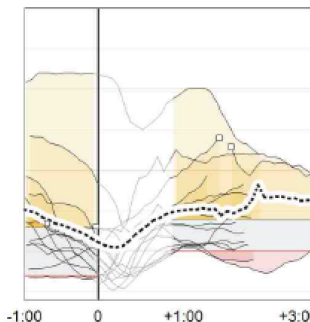
Breakfast: 07:00 - 09:00 (14)

Pre-meal SG Avg: 113 ± 20mg/dL
Post-meal SG Avg: 144 ± 43mg/dL
Avg Carbs: 3,9 ± 0,3ex
Avg Food Bolus: 6,9 ± 0,8U



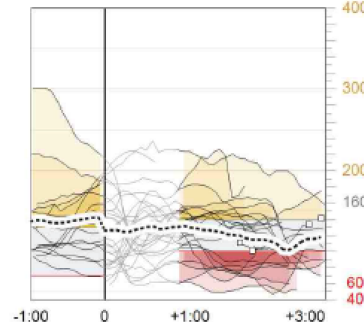
Almuerzo: 09:00 - 12:00 (15)

Pre-meal SG Avg: 135 ± 62mg/dL
Post-meal SG Avg: 136 ± 51mg/dL
Avg Carbs: 2,3 ± 0,9ex
Avg Food Bolus: 3,8 ± 1,4U



Lunch: 12:00 - 17:00 (29)

Pre-meal SG Avg: 139 ± 46mg/dL
Post-meal SG Avg: 125 ± 35mg/dL
Avg Carbs: 3,8 ± 2,3ex
Avg Food Bolus: 4,2 ± 2,6U



Statistics

Avg BG	137 ± 73mg/dL
Estimated A1C	6,3%
BG Readings	2,9 per day
Carbs Entered	21,6 ± 4,7ex per day

Hypoglycemic Patterns (0)

Time Period	
-------------	--

Hyperglycemic Patterns (1)

Time Period	22:25-23:15
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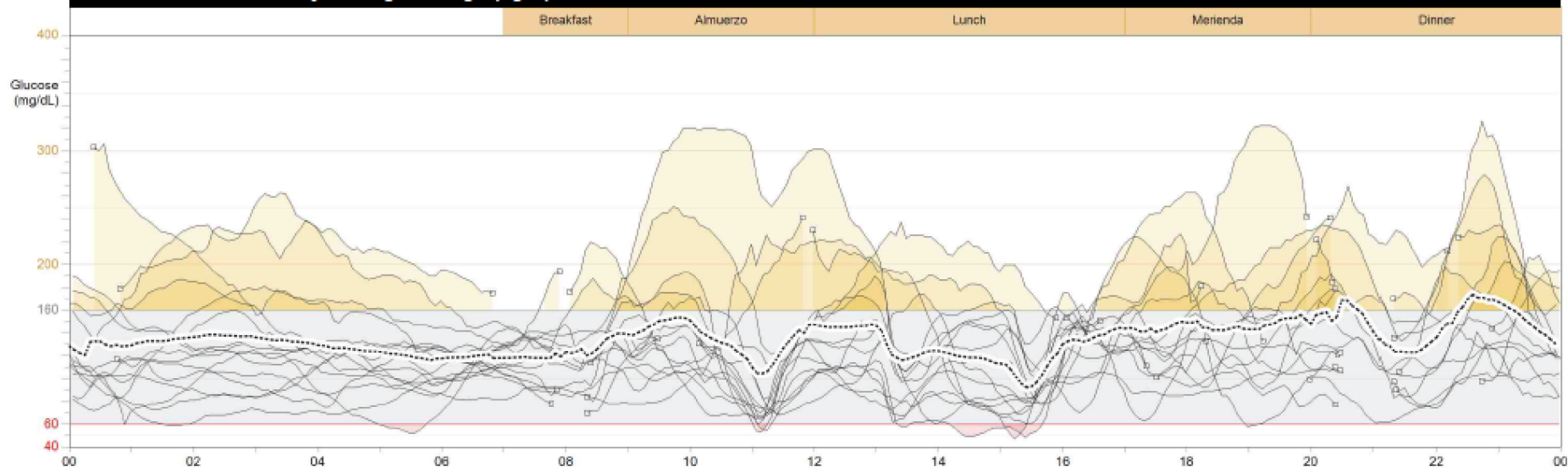
Pump Use	Per Day
Insulin TDD	53,9 ± 6,4U
Basal/Bolus Ratio	46 / 54
Manual Boluses	1,5U (1,3 boluses)
Bolus Wizard	27,6U (5,9 boluses)
Food	28,8U (5,6 boluses)
Correction	1,1U (0,6 boluses)
Override (+)	0,2U (0,3 boluses)
Override (-)	-1,9U (0,6 boluses)
Total Suspend	3h 38m (4,2 events)
Suspend On Low	7m (0,1 events)
Suspend Before Low	3h 30m (3,6 events)

Sensor Use

Avg SG	133 ± 47 mg/dL
Wear Duration	6d 03h per week
Low SG Alarms	1,4 per day
High SG Alarms	4,0 per day

	Glucose Measurements		Bolus Events					Fill Events					Suspend Duration (h:mm)
	BG Readings	Sensor Duration (h:mm)	Manual Boluses	Bolus Wizard Events	With Food	With Correction	Overridden	Rewind	Cannula Fills	Cannula Amount (U)	Tubing Fills	Tubing Amount (U)	
martes 16/01/2018	4	4:15		6	6	1							
miércoles 17/01/2018	3	24:00		7	6	1	1		1	1			2:43  
jueves 18/01/2018	2	23:25	1	6	6	1	1						4:34 
viernes 19/01/2018	3	22:45		5	5		2	1			1	11,1254	6:46  
sábado 20/01/2018	2	20:20	1	3	3								5:31 
domingo 21/01/2018	3	23:10	2	6	6		2		1	1			4:32  
lunes 22/01/2018	2	20:45	1	7	6		1						6:06  
martes 23/01/2018	3	23:10	1	6	5	1	2						2:28 
miércoles 24/01/2018	3	20:20		7	6	2		1	1	1	1	11,5129	1:55  
jueves 25/01/2018	4	21:25	3	8	7	1	3						3:15 
viernes 26/01/2018	2	23:05		5	5	1							3:19 
sábado 27/01/2018	2	21:50	3	4	4								3:46 
domingo 28/01/2018	3	17:35	2	6	5	2	1	1	1	1	1	9,2158	3:13  
lunes 29/01/2018	5	19:25	2	5	5								4:07 
Summary	2,9/day	11d 21h 30m	1,1/day	5,8/day	92,6%	12,3%	16,0%	3	4	1,0U /fill	3	10,6U/fill	2d 04h 15m

24-Hour Glucose Sensor Overlay - Readings & Averages (mg/dL)



Glucose Sensor Overlay Bedtime to Wake-Up and Meal Periods – Readings & Averages (mg/dL)

Bedtime to Wake-up

Breakfast: 07:00 - 09:00

Almuerzo: 09:00 - 12:00

Lunch: 12:00 - 17:00

Merienda: 17:00 - 20:00

Dinner: 20:00 - 00:00

Bedtime: 23:00 - 02:00

Meals Analyzed: 14

Meals Analyzed: 15

Meals Analyzed: 29

Meals Analyzed: 12

Meals Analyzed: 18

Wake-up: 05:00 - 09:00

Avg Carbs: 3,9ex

Avg Carbs: 2,3ex

Avg Carbs: 3,8ex

Avg Carbs: 4,4ex

Avg Carbs: 4,8ex

Avg Insulin: 7,0U

Avg Insulin: 3,5U

Avg Insulin: 4,0U

Avg Insulin: 5,7U

Avg Insulin: 5,9U

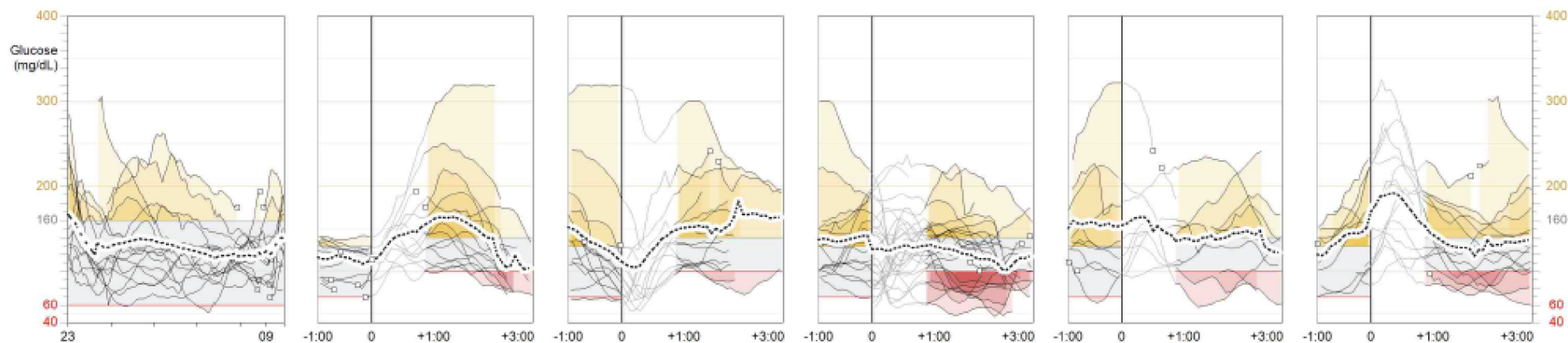
Avg Insulin/Carbs: 1,8U/ex

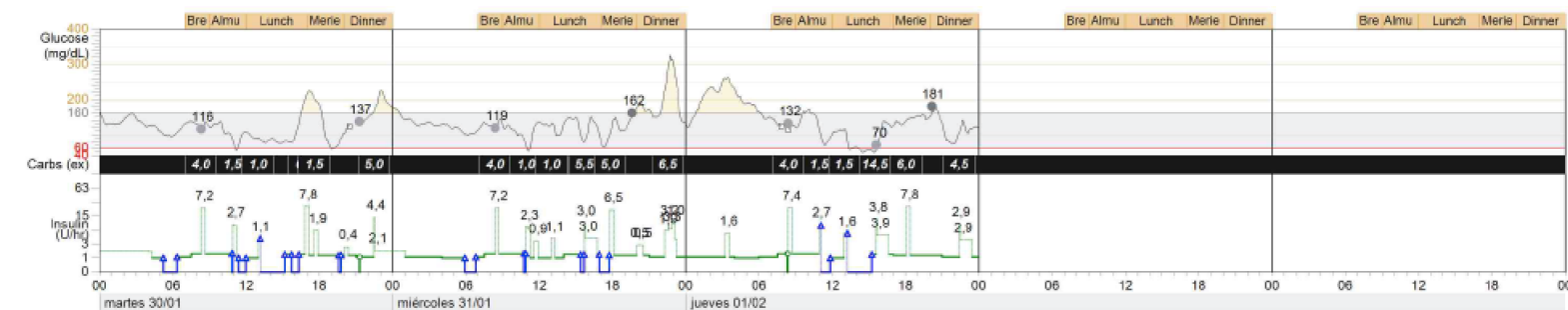
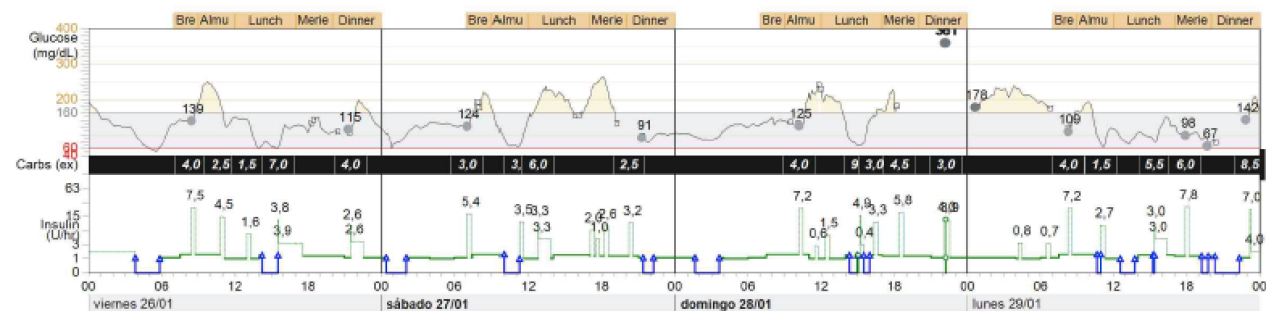
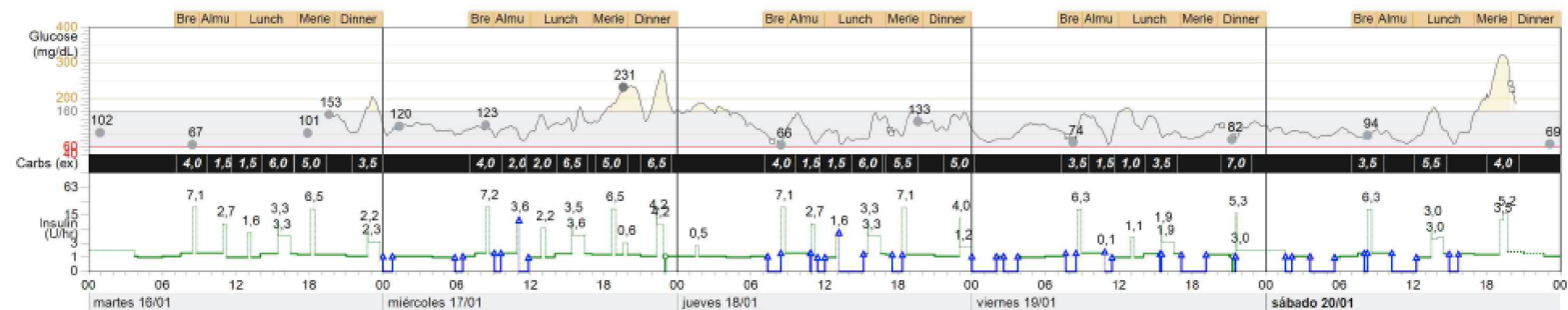
Avg Insulin/Carbs: 1,5U/ex

Avg Insulin/Carbs: 1,1U/ex

Avg Insulin/Carbs: 1,3U/ex

Avg Insulin/Carbs: 1,3U/ex







Bolus Events									
Bolus Event	1	2	3	4	5	6	7		
Time	08:21	10:58	12:55	15:24	18:37	19:35	22:17		
Bolus Type	Normal	Normal	Normal	Dual	Normal	Normal	Dual		
Delivered Bolus Norm (U)	7.20	3.60	2.20	3.50	6.50	0.600	4.20		
+ Square Portion (U, h:mm)	--	--	--	3.60, 1:00	--	--	4.20, 0:30		
Recommended Bolus (U)	7.20	3.60	2.20	7.10	6.50	--	8.40		
Difference (U)	--	--	--	--	--	0.600	--		
Carbs (ex)	4.0	2.0	2.0	6.5	5.0	--	6.5		
Carb Ratio Setting (U/ex)	1.8	1.8	1.1	1.1	1.3	1.3	1.3		
Food Bolus (U)	7.20	3.60	2.20	7.10	6.50	--	8.40		
BG (mg/dL)	123	--	--	--	--	231	--		
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120		
Insulin Sensitivity Setting (mg/dL per U)	60	60	60	60	60	60	60		
Correction Bolus (U)	--	--	--	--	--	1.80	--		
Active Insulin (U)	--	0.800	0.800	0.300	0.300	4.70	0.100		

Statistics	17/01		16/01 - 01/02	
Avg BG (mg/dL)	158		137 ± 73	
BG Readings	3		49	2.9/day
Readings Above Target	1	33%	11	22%
Readings Below Target	--	0%	--	0%
Sensor Avg (mg/dL)	138 ± 42		133 ± 47	
Avg AUC > 160 (mg/dL)	10.4	1d 0h	9.8	14d 20h
Avg AUC < 60 (mg/dL)	0.0	1d 0h	0.1	14d 20h

Daily Carbs (ex)	26.0		21.6 ± 4.7	
Bolus Insulin/Carbs (U/ex)	1.4		1.4	

Total Daily Insulin (U)	61.48		53.93 ± 6.4	
Daily Basal (U)	25.88	42%	24.71	46%
Daily Bolus (U)	35.60	58%	29.21	54%
Fills	1	1,000U	8	46,998U



Bolus Events									
Bolus Event	1	2	3	4	5	6	7		
Time	01:28	08:27	10:53	12:58	15:30	18:20	22:59		
Bolus Type	Normal	Normal	Normal	Normal	Dual	Normal	Dual		
Delivered Bolus Norm (U)	0,500	7,10	2,70	1,60	3,30	7,10	4,00		
+ Square Portion (U, h:mm)	--	--	--	--	3,30, 1:00	--	1,20, 2:00		
Recommended Bolus (U)	--	7,10	2,70	1,60	6,60	7,10	6,50		
Difference (U)	--	--	--	--	--	--	-1,300		
Carbs (ex)	--	4,0	1,5	1,5	6,0	5,5	5,0		
Carb Ratio Setting (U/ex)	--	1,8	1,8	1,1	1,1	1,3	1,3		
Food Bolus (U)	--	7,20	2,70	1,60	6,60	7,10	6,50		
BG (mg/dL)	--	66	--	--	--	--	--		
BG Target Setting (mg/dL)	--	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120		
Insulin Sensitivity Setting (mg/dL per U)	--	60	60	60	60	60	60		
Correction Bolus (U)	--	-0,100	--	--	--	--	--		
Active Insulin (U)	0,300	--	1,00	0,600	0,200	0,800	--		

Statistics	18/01		16/01 - 01/02	
Avg BG (mg/dL)	100		137 ± 73	
BG Readings	2		49	2,9/day
Readings Above Target	--	0%	11	22%
Readings Below Target	--	0%	--	0%
Sensor Avg (mg/dL)	127 ± 32		133 ± 47	
Avg AUC > 160 (mg/dL)	1,9	0d 24h	9,8	14d 20h
Avg AUC < 60 (mg/dL)	0,0	0d 24h	0,1	14d 20h

Daily Carbs (ex)	23,5		21,6 ± 4,7	
Bolus Insulin/Carbs (U/ex)	1,3		1,4	

Total Daily Insulin (U)	53,95		53,93 ± 6,4	
Daily Basal (U)	23,15	43%	24,71	46%
Daily Bolus (U)	30,80	57%	29,21	54%
Fills	--	--	8	46,998U



Bolus Events									
Bolus Event	1	2	3	4	5				
Time	08:36	10:50	12:56	15:28	21:32				
Bolus Type	Normal	Normal	Normal	Dual	Dual				
Delivered Bolus Norm (U)	6,30	0,050	1,10	1,90	5,30				
+ Square Portion (U, h:mm)	--	--	--	1,90, 1:00	3,03, 5:00				
Recommended Bolus (U)	6,30	2,70	1,10	3,80	9,10				
Difference (U)	--	-2,650	--	--	-0,775				
Carbs (ex)	3,5	1,5	1,0	3,5	7,0				
Carb Ratio Setting (U/ex)	1,8	1,8	1,1	1,1	1,3				
Food Bolus (U)	6,30	2,70	1,10	3,80	9,10				
BG (mg/dL)	--	--	--	--	--				
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120				
Insulin Sensitivity Setting (mg/dL per U)	60	60	60	60	60				
Correction Bolus (U)	--	--	--	--	--				
Active Insulin (U)	--	1,10	0,100	0,200	--				

Statistics	19/01		16/01 - 01/02	
Avg BG (mg/dL)	79		137 ± 73	
BG Readings	3		49	2,9/day
Readings Above Target	--	0%	11	22%
Readings Below Target	--	0%	--	0%
Sensor Avg (mg/dL)	112 ± 24		133 ± 47	
Avg AUC > 160 (mg/dL)	0,4	0d 23h	9,8	14d 20h
Avg AUC < 60 (mg/dL)	0,0	0d 23h	0,1	14d 20h

Daily Carbs (ex)	16,5	21,6 ± 4,7
Bolus Insulin/Carbs (U/ex)	1,1	1,4

Total Daily Insulin (U)	39,13		53,93 ± 6,4	
Daily Basal (U)	20,75	53%	24,71	46%
Daily Bolus (U)	18,37	47%	29,21	54%
Fills	1	11,125U	8	46,998U



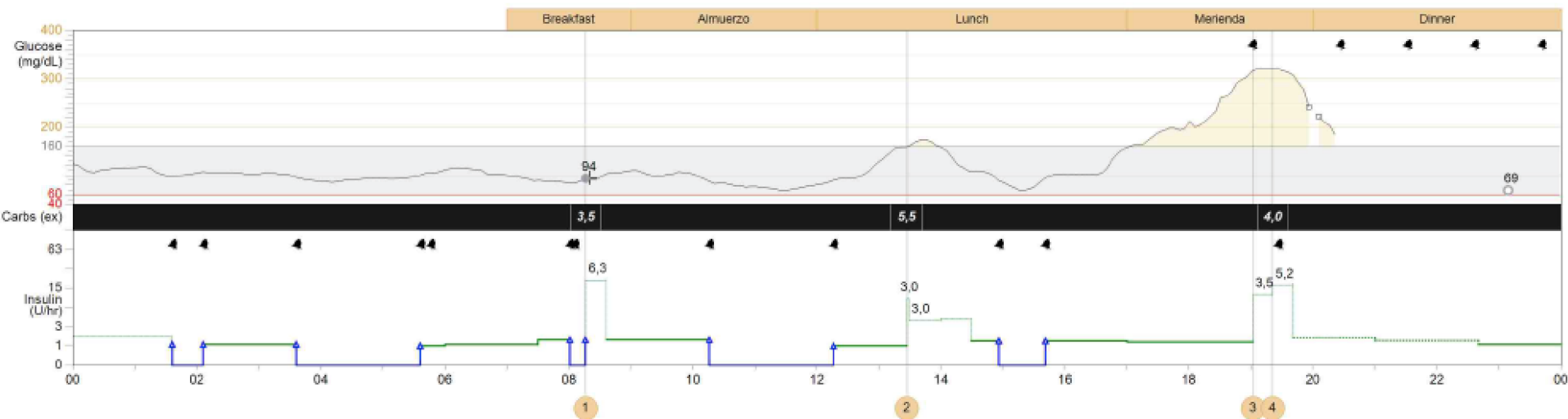
Bolus Events									
Bolus Event	1	2	3	4	5				
Time	08:36	10:50	12:58	15:28	21:32				
Bolus Type	Normal	Normal	Normal	Dual	Dual				
Delivered Bolus Norm (U)	6.30	0.050	1.10	1.90	5.30				
+ Square Portion (U, h:mm)	--	--	--	1.90, 1:00	3.03, 5:00				
Recommended Bolus (U)	6.30	2.70	1.10	3.80	9.10				
Difference (U)	--	-2.650	--	--	-0.775				
Carbs (ex)	3.5	1.5	1.0	3.5	7.0				
Carb Ratio Setting (U/ex)	1.8	1.8	1.1	1.1	1.3				
Food Bolus (U)	6.30	2.70	1.10	3.80	9.10				
BG (mg/dL)	--	--	--	--	--				
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120				
Insulin Sensitivity Setting (mg/dL per U)	60	60	60	60	60				
Correction Bolus (U)	--	--	--	--	--				
Active Insulin (U)	--	1.10	0.100	0.200	--				

Statistics	19/01		16/01 - 01/02	
Avg BG (mg/dL)	79		137 ± 73	
BG Readings	3		49	2.9/day
Readings Above Target	--	0%	11	22%
Readings Below Target	--	0%	--	0%
Sensor Avg (mg/dL)	112 ± 24		133 ± 47	
Avg AUC > 160 (mg/dL)	0.4	0d 23h	9.8	14d 20h
Avg AUC < 60 (mg/dL)	0.0	0d 23h	0.1	14d 20h

Daily Carbs (ex)	16.5		21.6 ± 4.7	
Bolus Insulin/Carbs (U/ex)	1.1		1.4	

Total Daily Insulin (U)	39.13		53.93 ± 6.4	
Daily Basal (U)	20.75	53%	24.71	46%
Daily Bolus (U)	18.37	47%	29.21	54%
Fills	1	11,125U	8	46,998U

Día de entrenamiento: 17 – 19 h



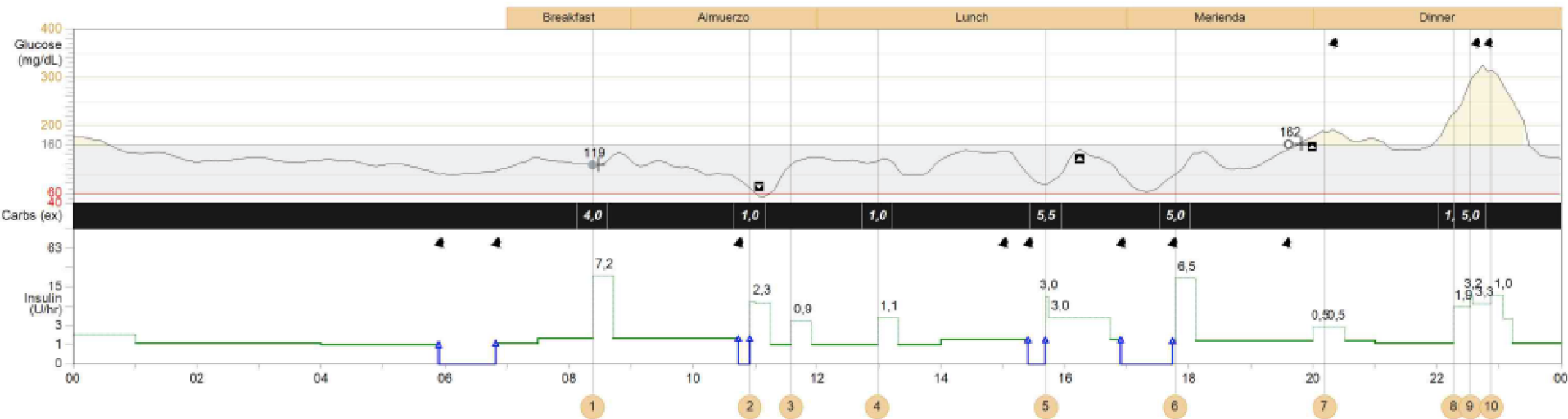
Bolus Events									
Bolus Event	1	2	3	4					
Time	08:16	13:26	19:01	19:20					
Bolus Type	Normal	Dual	Normal	Normal					
Delivered Bolus Norm (U)	6,30	3,00	3,50	5,20					
+ Square Portion (U, h:mm)	--	3,00, 1:00	--	--					
Recommended Bolus (U)	6,30	6,00	--	5,20					
Difference (U)	--	--	--	--					
Carbs (ex)	3,5	5,5	--	4,0					
Carb Ratio Setting (U/ex)	1,8	1,1	--	1,3					
Food Bolus (U)	6,30	6,00	--	5,20					
BG (mg/dL)	94	--	--	--					
BG Target Setting (mg/dL)	70 - 120	70 - 120	--	70 - 120					
Insulin Sensitivity Setting (mg/dL per U)	60	60	--	60					
Correction Bolus (U)	--	--	--	--					
Active Insulin (U)	--	--	--	3,40					

Statistics	20/01		16/01 - 01/02	
Avg BG (mg/dL)	82		137 ± 73	
BG Readings	2		49	2,9/day
Readings Above Target	--	0%	11	22%
Readings Below Target	--	0%	--	0%
Sensor Avg (mg/dL)	125 ± 59		133 ± 47	
Avg AUC > 160 (mg/dL)	13,5	0d 20h	9,8	14d 20h
Avg AUC < 60 (mg/dL)	0,0	0d 20h	0,1	14d 20h

Daily Carbs (ex)	13,0		21,6 ± 4,7
Bolus Insulin/Carbs (U/ex)	1,7		1,4

Total Daily Insulin (U)	45,75		53,93 ± 6,4	
Daily Basal (U)	23,55	51%	24,71	46%
Daily Bolus (U)	22,20	49%	29,21	54%
Fills	--	--	8	46,998U

Día de entrenamiento: 18 - 20

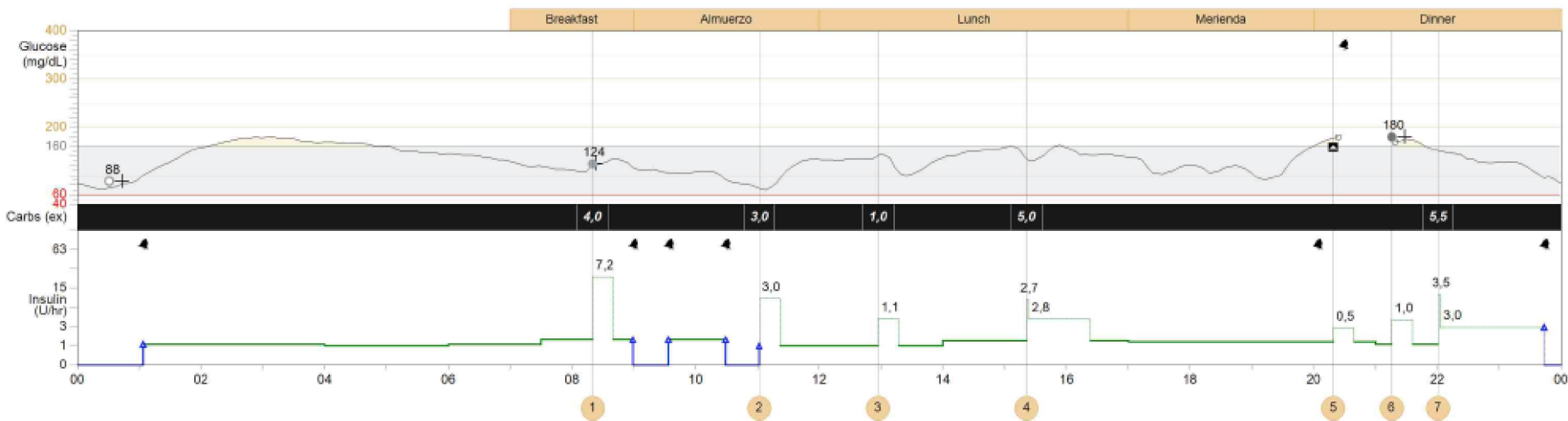


Bolus Events										
Bolus Event	1	2	3	4	5	6	7	8	9	10
Time	08:22	10:55	11:34	12:58	15:41	17:46	20:11	22:15	22:32	22:52
Bolus Type	Normal	Normal	Normal	Normal	Dual	Normal	Normal	Normal	Dual	Normal
Delivered Bolus Norm (U)	7,20	2,30	0,900	1,10	3,00	6,50	0,500	1,90	3,20	1,00
+ Square Portion (U, h:mm)	--	--	--	--	3,00, 1:00	--	--	--	3,30, 0:30	--
Recommended Bolus (U)	7,20	1,80	--	1,10	6,00	6,50	--	1,90	6,50	--
Difference (U)	--	0,500	--	--	--	--	--	--	--	--
Carbs (ex)	4,0	1,0	--	1,0	5,5	5,0	--	1,5	5,0	--
Carb Ratio Setting (U/ex)	1,8	1,8	--	1,1	1,1	1,3	--	1,3	1,3	--
Food Bolus (U)	7,20	1,80	--	1,10	6,00	6,50	--	1,90	6,50	--
BG (mg/dL)	119	--	--	--	--	--	--	--	--	--
BG Target Setting (mg/dL)	70 - 120	70 - 120	--	70 - 120	70 - 120	70 - 120	--	70 - 120	70 - 120	--
Insulin Sensitivity Setting (mg/dL per U)	60	60	--	60	60	60	--	60	60	--
Correction Bolus (U)	--	--	--	--	--	--	--	--	--	--
Active Insulin (U)	--	0,800	1,90	0,900	0,100	1,90	1,40	0,200	2,00	6,70

Statistics	31/01		16/01 - 01/02	
Avg BG (mg/dL)	141		137 ± 73	
BG Readings	2		49	2,9/day
Readings Above Target	1	50%	11	22%
Readings Below Target	--	0%	--	0%
Sensor Avg (mg/dL)	134 ± 42		133 ± 47	
Avg AUC > 160 (mg/dL)	7,3	1d 0h	9,8	14d 20h
Avg AUC < 60 (mg/dL)	0,0	1d 0h	0,1	14d 20h

Daily Carbs (ex)	23,0		21,6 ± 4,7
Bolus Insulin/Carbs (U/ex)	1,5		1,4

Total Daily Insulin (U)	61,48		53,93 ± 6,4	
Daily Basal (U)	26,22	43%	24,71	46%
Daily Bolus (U)	35,25	57%	29,21	54%
Fills	--	--	8	46,998U



Bolus Events									
Bolus Event	1	2	3	4	5	6	7		
Time	08:20	11:01	12:57	15:21	20:18	21:15	22:00		
Bolus Type	Normal	Normal	Normal	Dual	Normal	Normal	Dual		
Delivered Bolus Norm (U)	7,20	3,00	1,10	2,70	0,500	1,00	3,50		
+ Square Portion (U, h:mm)	--	--	--	2,80, 1:00	--	--	3,03, 2:00		
Recommended Bolus (U)	7,20	3,00	1,10	5,50	--	0,800	7,10		
Difference (U)	--	--	--	--	--	0,400	-0,575		
Carbs (ex)	4,0	3,0	1,0	5,0	--	--	5,5		
Carb Ratio Setting (U/ex)	1,8	1,0	1,1	1,1	--	1,3	1,3		
Food Bolus (U)	7,20	3,00	1,10	5,50	--	--	7,10		
BG (mg/dL)	124	--	--	--	--	180	--		
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120	70 - 120	--	70 - 120	70 - 120		
Insulin Sensitivity Setting (mg/dL per U)	60	60	60	60	--	60	60		
Correction Bolus (U)	--	--	--	--	--	1,00	--		
Active Insulin (U)	--	0,700	0,800	0,200	--	0,400	1,00		

Statistics	23/01		16/01 - 01/02	
Avg BG (mg/dL)	131		137 ± 73	
BG Readings	3		49	2,9/day
Readings Above Target	1	33%	11	22%
Readings Below Target	--	0%	--	0%
Sensor Avg (mg/dL)	131 ± 27		133 ± 47	
Avg AUC > 160 (mg/dL)	1,9	0d 23h	9,8	14d 20h
Avg AUC < 60 (mg/dL)	0,0	0d 23h	0,1	14d 20h

Daily Carbs (ex)	18,5		21,6 ± 4,7	
Bolus Insulin/Carbs (U/ex)	1,3		1,4	

Total Daily Insulin (U)	50,70		53,93 ± 6,4	
Daily Basal (U)	25,88	51%	24,71	46%
Daily Bolus (U)	24,83	49%	29,21	54%
Fills	--	--	8	46,998U



Bolus Events									
Bolus Event	1	2	3	4	5				
Time	08:25	10:49	12:58	15:32	21:30				
Bolus Type	Normal	Normal	Normal	Dual	Dual				
Delivered Bolus Norm (U)	7,50	4,50	1,60	3,80	2,60				
+ Square Portion (U, h:mm)	--	--	--	3,90, 2:00	2,60, 1:00				
Recommended Bolus (U)	7,50	4,50	1,60	7,70	5,20				
Difference (U)	--	--	--	--	--				
Carbs (ex)	4,0	2,5	1,5	7,0	4,0				
Carb Ratio Setting (U/ex)	1,8	1,8	1,1	1,1	1,3				
Food Bolus (U)	7,20	4,50	1,60	7,70	5,20				
BG (mg/dL)	139	--	--	--	--				
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120				
Insulin Sensitivity Setting (mg/dL per U)	60	60	60	60	60				
Correction Bolus (U)	0,300	--	--	--	--				
Active Insulin (U)	--	1,00	1,00	0,200	--				

Statistics	26/01		16/01 - 01/02	
Avg BG (mg/dL)	127		137 ± 73	
BG Readings	2		49	2,9/day
Readings Above Target	--	0%	11	22%
Readings Below Target	--	0%	--	0%
Sensor Avg (mg/dL)	129 ± 44		133 ± 47	
Avg AUC > 160 (mg/dL)	7,4	0d 23h	9,8	14d 20h
Avg AUC < 60 (mg/dL)	0,1	0d 23h	0,1	14d 20h

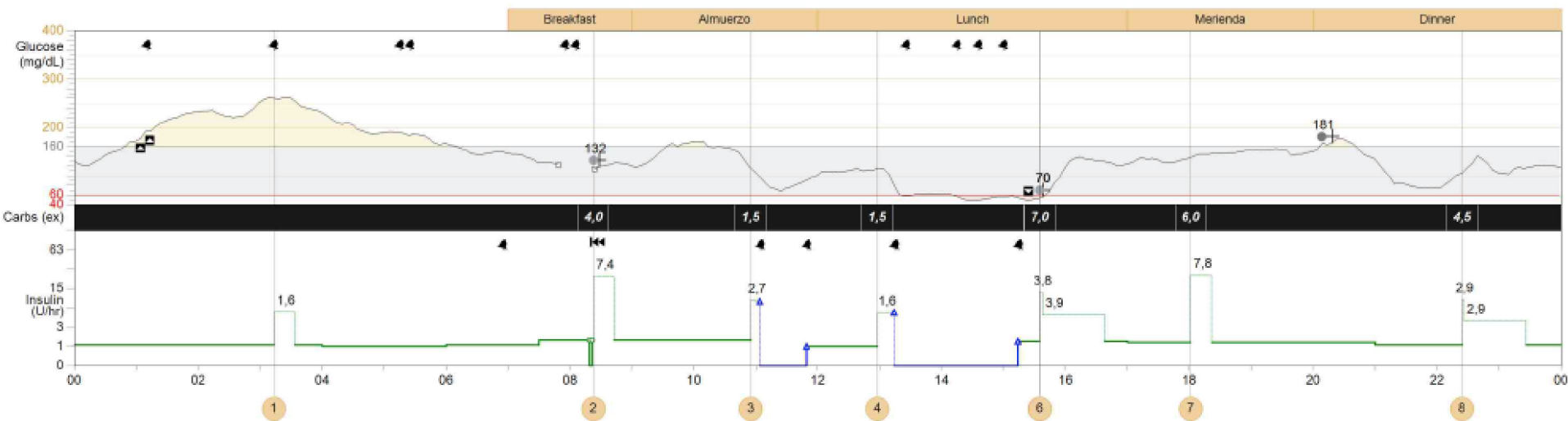
Daily Carbs (ex)	19,0		21,6 ± 4,7	
Bolus Insulin/Carbs (U/ex)	1,6		1,4	

Total Daily Insulin (U)	54,75		53,93 ± 6,4	
Daily Basal (U)	25,14	46%	24,71	46%
Daily Bolus (U)	29,61	54%	29,21	54%
Fills	--	--	8	46,998U



Bolus Events									
Bolus Event	1	2	3	4	5	6	7		
Time	07:03	11:15	12:44	17:00	17:29	18:11	20:13		
Bolus Type	Normal	Normal	Dual	Normal	Normal	Normal	Normal		
Delivered Bolus Norm (U)	5.40	3.50	3.30	2.00	1.00	2.60	3.20		
+ Square Portion (U, h:mm)	--	--	3.30, 1:00	--	--	--	--		
Recommended Bolus (U)	5.40	3.50	6.60	--	--	--	3.20		
Difference (U)	--	--	--	--	--	--	--		
Carbs (ex)	3.0	3.5	6.0	--	--	--	2.5		
Carb Ratio Setting (U/ex)	1.8	1.0	1.1	--	--	--	1.3		
Food Bolus (U)	5.40	3.50	6.60	--	--	--	3.20		
BG (mg/dL)	124	--	--	--	--	--	--		
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120	--	--	--	70 - 120		
Insulin Sensitivity Setting (mg/dL per U)	60	60	60	--	--	--	60		
Correction Bolus (U)	--	--	--	--	--	--	--		
Active Insulin (U)	--	--	1.50	--	1.90	2.10	0.700		

Statistics		27/01	16/01 - 01/02	
Avg BG (mg/dL)		108	137 ± 73	
BG Readings		2	49	2.9/day
Readings Above Target		--	0%	11
Readings Below Target		--	0%	--
Sensor Avg (mg/dL)		144 ± 53	133 ± 47	
Avg AUC > 160 (mg/dL)		16.5	0d 22h	9.8
Avg AUC < 60 (mg/dL)		0.0	0d 22h	0.1
Daily Carbs (ex)		15.0	21.6 ± 4.7	
Bolus Insulin/Carbs (U/ex)		1.6	1.4	
Total Daily Insulin (U)		48.80	53.93 ± 6.4	
Daily Basal (U)		24.50	50%	24.71
Daily Bolus (U)		24.30	50%	29.21
Fills		--	--	8



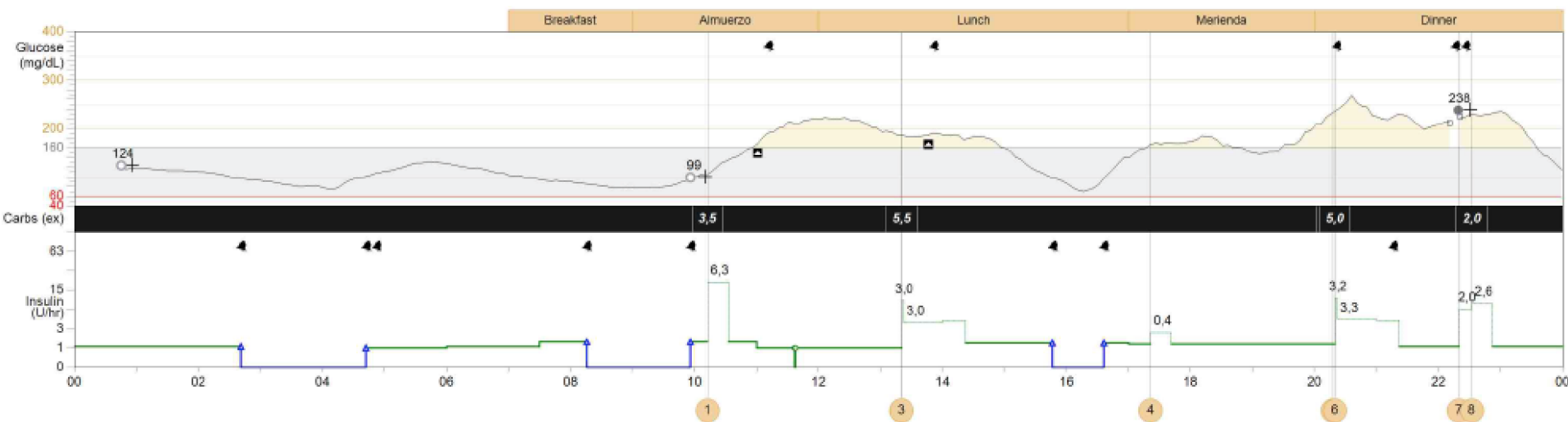
Bolus Events										
Bolus Event	1	2	3	4	5	6	7	8		
Time	03:13	08:22	10:55	12:57	15:34	15:35	18:01	22:24		
Bolus Type	Normal	Normal	Normal	Normal	--	Dual	Normal	Dual		
Delivered Bolus Norm (U)	1,60	7,40	2,70	1,60	--	3,80	7,80	2,90		
+ Square Portion (U, h:mm)	--	--	--	--	--	3,90, 1:00	--	2,90, 1:00		
Recommended Bolus (U)	--	7,40	2,70	1,60	8,20	7,70	7,80	5,80		
Difference (U)	--	--	--	--	-8,200	--	--	--		
Carbs (ex)	--	4,0	1,5	1,5	7,5	7,0	6,0	4,5		
Carb Ratio Setting (U/ex)	--	1,8	1,8	1,1	1,1	1,1	1,3	1,3		
Food Bolus (U)	--	7,20	2,70	1,60	8,20	7,70	7,80	5,80		
BG (mg/dL)	--	132	--	--	70	70	--	--		
BG Target Setting (mg/dL)	--	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120		
Insulin Sensitivity Setting (mg/dL per U)	--	60	60	60	60	60	60	60		
Correction Bolus (U)	--	0,200	--	--	--	--	--	--		
Active Insulin (U)	--	--	0,800	0,600	0,200	0,200	1,60	--		

Statistics		01/02		16/01 - 01/02	
Avg BG (mg/dL)		113		137 ± 73	
BG Readings		4		49	2,9/day
Readings Above Target		1	25%	11	22%
Readings Below Target		--	0%	--	0%
Sensor Avg (mg/dL)		140 ± 51		133 ± 47	
Avg AUC > 160 (mg/dL)		12,3	0d 24h	9,8	14d 20h
Avg AUC < 60 (mg/dL)		0,4	0d 24h	0,1	14d 20h

Daily Carbs (ex)		32,0		21,6 ± 4,7	
Bolus Insulin/Carbs (U/ex)		1,1		1,4	

Total Daily Insulin (U)		60,25		53,93 ± 6,4	
Daily Basal (U)		25,85	43%	24,71	46%
Daily Bolus (U)		34,60	57%	29,21	54%
Fills		1	11,144U	8	46,998U

Fin de semana



Bolus Events										
Bolus Event	1	2	3	4	5	6	7	8		
Time	10:12	13:20	13:20	17:21	20:17	20:19	22:19	22:32		
Bolus Type	Normal	--	Dual	Normal	--	Dual	Normal	Normal		
Delivered Bolus Norm (U)	6,30	--	3,00	0,400	--	3,20	2,00	2,60		
+ Square Portion (U, h:mm)	--	--	3,00, 1:00	--	--	3,30, 1:00	--	--		
Recommended Bolus (U)	6,30	6,60	6,00	--	6,50	6,50	--	2,60		
Difference (U)	--	-6,600	--	--	-6,500	--	--	--		
Carbs (ex)	3,5	6,0	5,5	--	5,0	5,0	--	2,0		
Carb Ratio Setting (U/ex)	1,8	1,1	1,1	--	1,3	1,3	--	1,3		
Food Bolus (U)	6,30	6,60	6,00	--	6,50	6,50	--	2,60		
BG (mg/dL)	--	--	--	--	--	--	--	--		
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120	--	70 - 120	70 - 120	--	70 - 120		
Insulin Sensitivity Setting (mg/dL per U)	60	60	60	--	60	60	--	60		
Correction Bolus (U)	--	--	--	--	--	--	--	--		
Active Insulin (U)	--	--	--	--	0,100	0,100	2,30	3,80		

Statistics	21/01		16/01 - 01/02	
Avg BG (mg/dL)	154		137 ± 73	
BG Readings	3		49	2,9/day
Readings Above Target	1	33%	11	22%
Readings Below Target	--	0%	--	0%
Sensor Avg (mg/dL)	146 ± 52		133 ± 47	
Avg AUC > 160 (mg/dL)	17,0	0d 23h	9,8	14d 20h
Avg AUC < 60 (mg/dL)	0,0	0d 23h	0,1	14d 20h

Daily Carbs (ex)	27,0		21,6 ± 4,7	
Bolus Insulin/Carbs (U/ex)	0,9		1,4	

Total Daily Insulin (U)	46,95		53,93 ± 6,4	
Daily Basal (U)	23,15	49%	24,71	46%
Daily Bolus (U)	23,80	51%	29,21	54%
Fills	1	1,000U	8	46,998U

Caso 3

- Adolescente de 13 años con DM desde los 5 años.
- Remitida en 2015 por HbA1c mayor de 8 y perdida de calidad de vida

		Fecha	Edad	Edad ósea	Tanner	Peso	Z	Talla	Z	ICM	Z	HbA1c DCA20	HbA1c	UI / kg / día	Tens Art	Fondo ojo	Fecha Analítica	Cambios
✗	→	16/06/2017	13,02			71	1,83	172,0	2,46	24,00	0,85	6,6		1,30				
✗	→	01/03/2017	12,73			66,8	1,45	170,3	2,19	23,03	0,61	6,7		1,01	102/62			
✗	→	30/11/2016	12,48			60,5	1,07	168,9	2,08	21,21	0,29	7,3		1,03				
✗	→	24/08/2016	12,21			55	1,01	166,6	2,27	19,82	0,09		6,9	0,93				
✗	→	24/05/2016	11,96															
✗	→	17/05/2016	11,94															
✗	→	09/05/2016	11,92			43,3	-0,20	163,3	1,76	16,24	-0,97			0,81				
✗	→	21/03/2016	11,79										6,9					
✗	→	23/02/2016	11,71															
✗	→	10/02/2016	11,68															
✗	→	04/02/2016	11,66															
✗	→	03/02/2016	11,66															
✗	→	28/01/2016	11,64															
✗	→	25/01/2016	11,63			40,5	-0,33	160,6	1,68	15,70	-1,11		7,3	0,76				ISCI
✗	→	02/12/2015	11,48															
✗	→	28/10/2015	11,39			40	-0,38						8,1	0,00				

- Se ajusta pauta de tratamiento y se remite, tras comprobar indicación de ISCI, para formación

Historia Actual	Exploración	P.Complementarias	Tratamiento	Notas - Intereses	Recomendaciones																																																									
Alimentación	Actividad	M.D.I.	ISCI / Calculador	ADO	Otros	Resumen Tto																																																								
<table border="1"> <thead> <tr> <th></th> <th>Hora</th> <th>Previa</th> <th>Nueva</th> <th>UI/Rac</th> <th>I UI/Rac</th> <th>Sensibilidad</th> <th></th> </tr> </thead> <tbody> <tr> <td>Desayuno:</td> <td></td> <td></td> <td>4</td> <td>1,0</td> <td></td> <td></td> <td>Humalog KwikPen</td> </tr> <tr> <td>Almuerzo:</td> <td></td> <td></td> <td>2</td> <td>1,0</td> <td></td> <td></td> <td>Humalog KwikPen</td> </tr> <tr> <td>Comida:</td> <td></td> <td></td> <td>4</td> <td>0,7</td> <td></td> <td></td> <td>Humalog KwikPen</td> </tr> <tr> <td>Merienda:</td> <td></td> <td></td> <td>2</td> <td>0,7</td> <td></td> <td></td> <td>Humalog KwikPen</td> </tr> <tr> <td>Cena:</td> <td></td> <td></td> <td>3</td> <td>0,6</td> <td></td> <td></td> <td>Humalog KwikPen</td> </tr> <tr> <td>Basal 24h:</td> <td></td> <td></td> <td>15</td> <td></td> <td></td> <td></td> <td>Lantus SoloStar</td> </tr> </tbody> </table> % Rápida 50 F. Sens. 60,7 UI/kg/día 0,00								Hora	Previa	Nueva	UI/Rac	I UI/Rac	Sensibilidad		Desayuno:			4	1,0			Humalog KwikPen	Almuerzo:			2	1,0			Humalog KwikPen	Comida:			4	0,7			Humalog KwikPen	Merienda:			2	0,7			Humalog KwikPen	Cena:			3	0,6			Humalog KwikPen	Basal 24h:			15				Lantus SoloStar
	Hora	Previa	Nueva	UI/Rac	I UI/Rac	Sensibilidad																																																								
Desayuno:			4	1,0			Humalog KwikPen																																																							
Almuerzo:			2	1,0			Humalog KwikPen																																																							
Comida:			4	0,7			Humalog KwikPen																																																							
Merienda:			2	0,7			Humalog KwikPen																																																							
Cena:			3	0,6			Humalog KwikPen																																																							
Basal 24h:			15				Lantus SoloStar																																																							

- Qué ajuste inicial de terapia recomendaría? En este momento tiene 11 años, Tanner 2
- No vale mirar la siguiente página!!

Inicio Insertar Diseño de página Fórmulas Datos Revisar Ver

Pegar Cortar Copiar Formato

Ajustar texto Combinar y centrar

Formato condicional Dar forma como tabla

B2 fx 32

A B C D E F G H I J K L M N O P Q R S T

Ajuste de MDI a ISCI:

UI Totales MDI: 32 Reducción MDI - ISCI: 10%

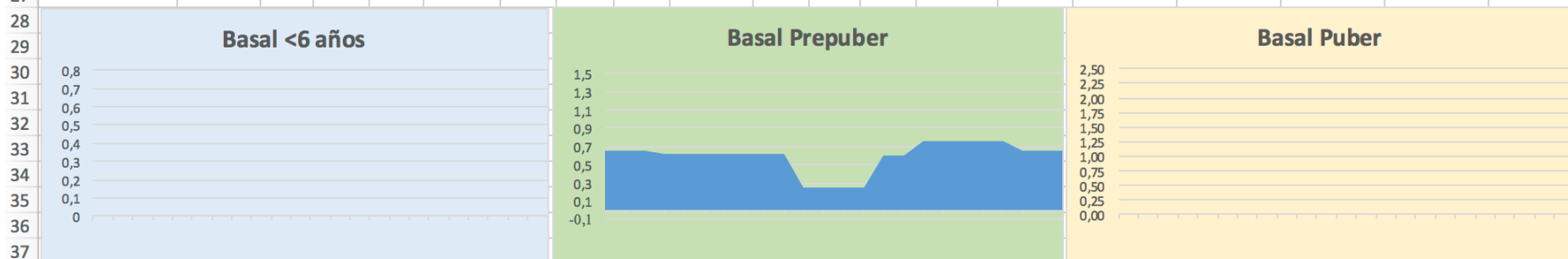
UI Totales ISCI: 29 Grupo Edad ISCI: 2 1= Menor 6 años
2 = Prepuber
3 = Puber

Distribución Inicial de Insulina:
Bolus: 17,28 Basal: 11,52



Cálculo BASAL Total Basal: 11,5 0,480

Bloque	< 6 años			Prepuber			Puber ...		
	Hora			Hora			Hora		
	Inicio	Fin	UI/h	Inicio	Fin	UI/h	Inicio	Fin	UI/h
1	0	2	0,000	0	4	0,650	0	4	0,000
2	2	7	0,000	4	7	0,625	4	7	0,000
3	7	9	0,000	7	11	0,625	7	11	0,000
4	9	14	0,000	11	15	0,250	11	15	0,000
5	14	17	0,000	15	17	0,600	15	18	0,000
6	17	22	0,000	17	22	0,750	18	22	0,000
7	22	24	0,000	22	24	0,650	22	24	0,000
			0,000			11,625			0,000



Formación



7

28/10/2015

Actualizar Bolus

Indice de Corrección 2000

Bolo		UI/R HC		
	Hora	UI / Rac	HC/UI	Bolo
Nocturna	24:00	0,70	14,3	
Desayuno	6:30	1,75	5,7	7,00
Almuerzo	10:30	0,77	13,0	2,31
Comida	12:30	0,80	12,5	4,80
Merienda	16:00	0,80	12,5	2,40
Cena	19:00	0,75	13,3	3,75

Factor de Corrección:		Objetivo de glucemia	
Inicio	Prog	Inicio	Prog
0:00	80	0	80 - 140
4:00	70	7	70 - 120
7:00	70		
10:00	85		
16:00	70		
22:30	60		
		Duración de Insulina	
		3	

Basal 1	Basal 2	Basal 3	Basal 4	Basal 5
Laborable				
Desde:	Hasta:	Ritmo:		
0:00	2:00	0,600		
2:00	6:00	0,500		
6:00	10:00	0,800		
10:00	13:30	0,100		
13:30	17:00	0,500		
17:00	20:00	0,650		
20:00	24:00	0,600		
Suma Basal			12,850	

En Visita de Octubre 2017,

Peso: 72,5 Kg, Talla: 172,5 cm; IMC ZS: 0,92. HbA1c de 6,3%

Menarquia en febrero de 2017

Presenta la descarga de datos siguiente, en la que se han de detectar:

- Adherencia al tratamiento.
 - Utilización de calculador de bolo
 - Corrección de hiperglucemias fuera de las hora de comida
 - Cree que presenta un adecuado control metabólico definido por media y DS
 - El porcentaje de Hipos e hiperglucemia le merece algún comentario.
 - Identifica algún patrón de tendencia en la gráfica de datos?
 - Qué opina de la distribución de insulina en bolo – basal?
 - Necesita algún dato más...?
 - Alguna Hipótesis? Y solución?
-
- Podría la combinada ISCI-MCG mejorar a esta paciente? Razone respuesta.



	Glucose Measurements		Bolus Events					Fill Events					Suspend Duration (h:mm)	
	BG Readings	Sensor Duration (h:mm)	Manual Boluses	Bolus Wizard Events	With Food	With Correction	Overridden	Rewind	Cannula Fills	Cannula Amount (U)	Tubing Fills	Tubing Amount (U)		
lunes 11/09/2017	4			4	4		1						0:01	↑
martes 12/09/2017	4			5	3	3							0:01	↑
miércoles 13/09/2017	4			4	3	2		1	1	0,7	1	10,0369	0:06	↑
jueves 14/09/2017	3			3	3									
viernes 15/09/2017	4			3	3	2								
sábado 16/09/2017	4			5	5	3	2							
domingo 17/09/2017	4			3	3			1	1	0,7	1	12,5645	0:04	↑
lunes 18/09/2017	4			5	5									
martes 19/09/2017	4			5	5	1	1							
miércoles 20/09/2017	4			6	5	2		1	1	0,7	1	12,7952	0:04	↑
jueves 21/09/2017	4			5	4	1								
viernes 22/09/2017	5			3	3		1							
sábado 23/09/2017	5			5	4	1								
domingo 24/09/2017	4			6	4	2		1	1	0,7	1	12,1494	0:04	↑
Summary	4,1/day	0m	0,0/day	4,4/day	87,1%	27,4%	8,1%	4	4	0,7U /fill	4	11,9U/fill	20m	

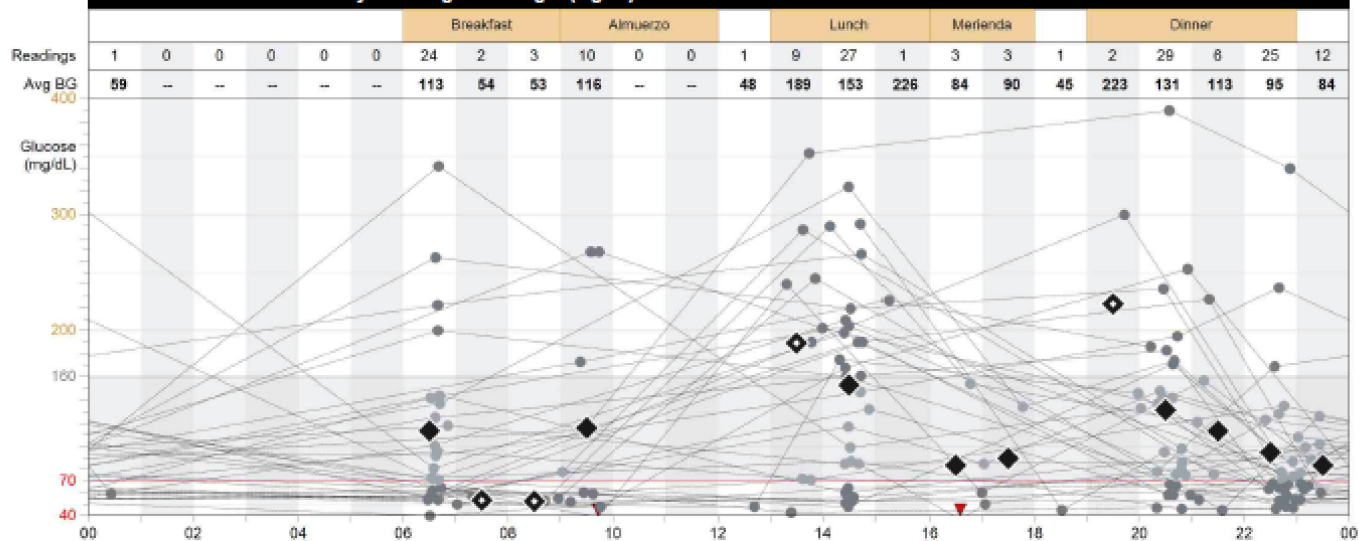


	Glucose Measurements		Bolus Events					Fill Events					Suspend Duration (h:mm)
	BG Readings	Sensor Duration (h:mm)	Manual Boluses	Bolus Wizard Events	With Food	With Correction	Overridden	Rewind	Cannula Fills	Cannula Amount (U)	Tubing Fills	Tubing Amount (U)	
lunes 11/09/2017	4			4	4		1						0:01 ↑
martes 12/09/2017	4			5	3	3							0:01 ↑
miércoles 13/09/2017	4			4	3	2		1	1	0,7	1	10,0369	0:06 ↑
jueves 14/09/2017	3			3	3								
viernes 15/09/2017	4			3	3	2							
sábado 16/09/2017	4			5	5	3	2						
domingo 17/09/2017	4			3	3			1	1	0,7	1	12,5845	0:04 ↑
lunes 18/09/2017	4			5	5								
martes 19/09/2017	4			5	5	1	1						
miércoles 20/09/2017	4			6	5	2		1	1	0,7	1	12,7952	0:04 ↑
jueves 21/09/2017	4			5	4	1							
viernes 22/09/2017	5			3	3		1						
sábado 23/09/2017	5			5	4	1							
domingo 24/09/2017	4			6	4	2		1	1	0,7	1	12,1494	0:04 ↑
Summary	4,1/day	0m	0,0/day	4,4/day	87,1%	27,4%	8,1%	4	4	0,7U /fill	4	11,9U/fill	20m

	Glucose Measurements		Bolus Events					Fill Events					Suspend Duration (h:mm)
	BG Readings	Sensor Duration (h:mm)	Manual Boluses	Bolus Wizard Events	With Food	With Correction	Overridden	Rewind	Cannula Fills	Cannula Amount (U)	Tubing Fills	Tubing Amount (U)	
lunes 09/10/2017	4			6	6	1		1	1	0,7	1	11,0701	0:04 
martes 10/10/2017	4			6	6	1	2						
miércoles 11/10/2017	4			5	4	1			1	0,7			0:01 
jueves 12/10/2017	3			5	5	2		1	1	0,7	1	9,4188	0:04 
viernes 13/10/2017	4			3	3	2							
sábado 14/10/2017	5			5	4	3							
domingo 15/10/2017	5			5	4	4		1	1	0,7	1	10,4243	0:04 
lunes 16/10/2017	4			6	5	1	1						
martes 17/10/2017	5			5	5								
miércoles 18/10/2017	4			4	4			1	1	0,7	1	9,4741	0:04 
jueves 19/10/2017	4			3	3	1							
viernes 20/10/2017	1			1	1								
Summary	4,2/day	0m	0,0/day	4,8/day	92,6%	29,6%	5,6%	4	5	0,7U /fill	4	10,1U/fill	17m



24-Hour Meter Glucose Overlay - Readings & Averages (mg/dL)



Statistics

11/09 - 20/10

Avg BG (mg/dL)	121 ± 79	
BG Readings	159	4,1/day
Readings Above Target	41	26%
Readings Below Target	58	36%
Sensor Avg (mg/dL)	—	
Avg AUC > 160 (mg/dL)	—	—
Avg AUC < 70 (mg/dL)	—	—

Avg Daily Carbs (ex)	15,4 ± 5,3
Bolus Insulin/Carbs (U/ex)	2,1

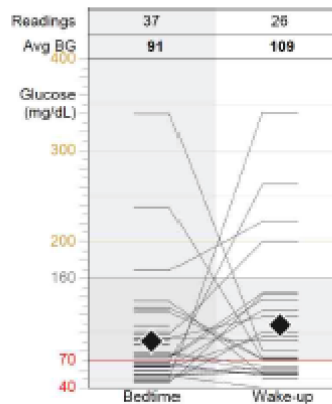
Avg Total Daily Insulin (U)	77,13 ± 12,8	
Avg Daily Basal (U)	44,62	58%
Avg Daily Bolus (U)	32,51	42%

Meter Glucose Overlay Bedtime to Wake-Up and Meal Periods – Readings & Averages (mg/dL)

Bedtime to Wake-up

Bedtime: 22:00 - 00:00

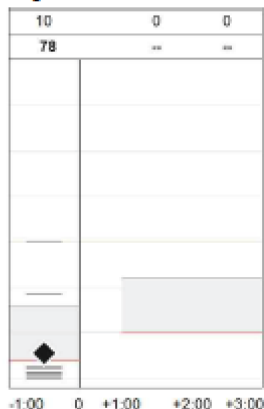
Wake-up: 05:00 - 08:00



Breakfast: 06:00 - 09:00

Meals Analyzed: 10

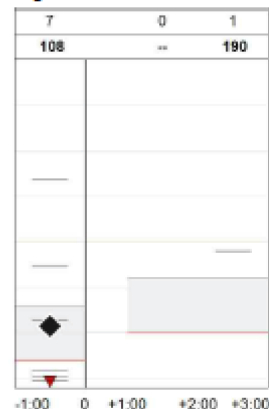
Avg Carbs: 3,4ex
Avg Insulin: 8,3U
Avg Insulin/Carbs: 2,5U/ex



Almuerzo: 09:00 - 12:00

Meals Analyzed: 8

Avg Carbs: 3,8ex
Avg Insulin: 9,4U
Avg Insulin/Carbs: 2,5U/ex



Lunch: 13:00 - 16:00

Meals Analyzed: 39

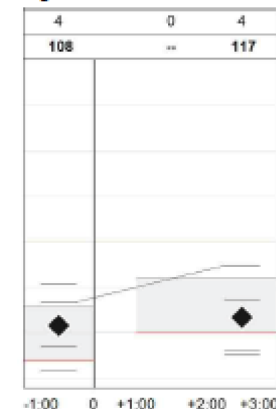
Avg Carbs: 5,2ex
Avg Insulin: 11,2U
Avg Insulin/Carbs: 2,2U/ex



Merienda: 16:00 - 18:00

Meals Analyzed: 7

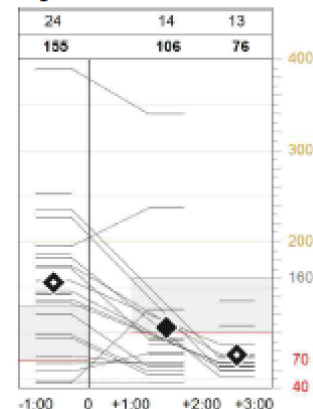
Avg Carbs: 3,1ex
Avg Insulin: 6,5U
Avg Insulin/Carbs: 2,1U/ex

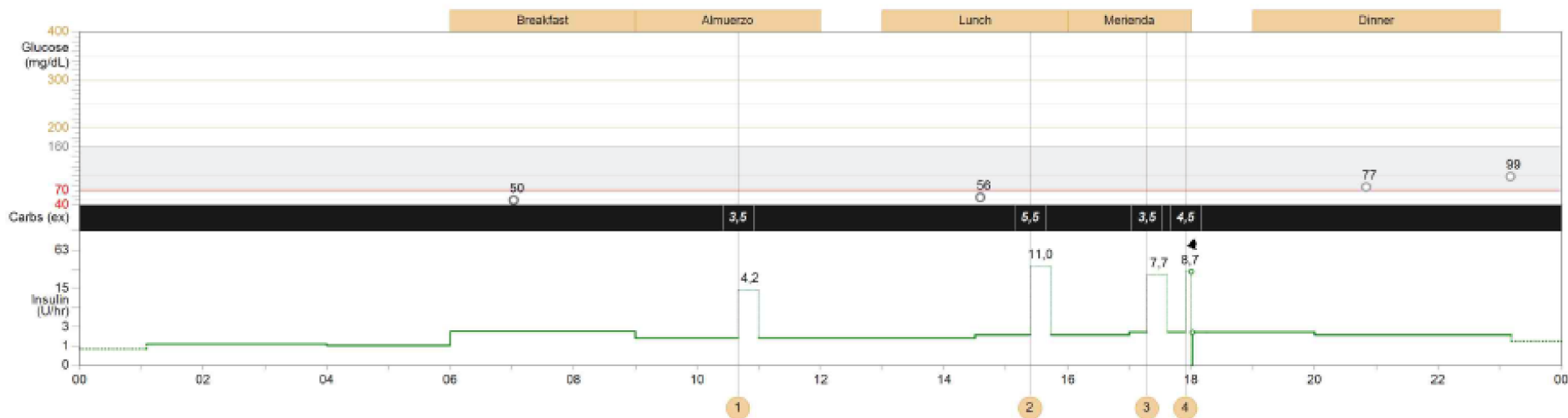


Dinner: 19:00 - 23:00

Meals Analyzed: 35

Avg Carbs: 3,4ex
Avg Insulin: 5,9U
Avg Insulin/Carbs: 1,8U/ex





Bolus Events

Bolus Event	1	2	3	4					
Time	10:39	15:23	17:17	17:54					
Bolus Type	Normal	Normal	Normal	Normal					
Delivered Bolus Norm (U)	4,20	11,0	7,70	8,70					
+ Square Portion (U, h:mm)	--	--	--	--					
Recommended Bolus (U)	4,20	11,0	7,70	9,90					
Difference (U)	--	--	--	-1,200					
Carbs (ex)	3,5	5,5	3,5	4,5					
Carb Ratio Setting (U/ex)	1,2	2,0	2,2	2,2					
Food Bolus (U)	4,20	11,0	7,70	9,90					
BG (mg/dL)	--	--	--	--					
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120	70 - 120					
Insulin Sensitivity Setting (mg/dL per U)	40	40	30	30					
Correction Bolus (U)	--	--	--	--					
Active Insulin (U)	--	--	3,08	7,93					

Statistics	11/09	11/09 - 20/10
Avg BG (mg/dL)	71	121 ± 79
BG Readings	4	159 4,1/day
Readings Above Target	-- 0%	41 26%
Readings Below Target	2 50%	58 36%
Sensor Avg (mg/dL)	--	--
Avg AUC > 160 (mg/dL)	--	--
Avg AUC < 70 (mg/dL)	--	--

Daily Carbs (ex)	17,0	15,4 ± 5,3
Bolus Insulin/Carbs (U/ex)	1,9	2,1

Total Daily Insulin (U)	73,55	77,13 ± 12,8
Daily Basal (U)	41,95 57%	44,62 58%
Daily Bolus (U)	31,60 43%	32,51 42%
Fills	--	25 144,017U



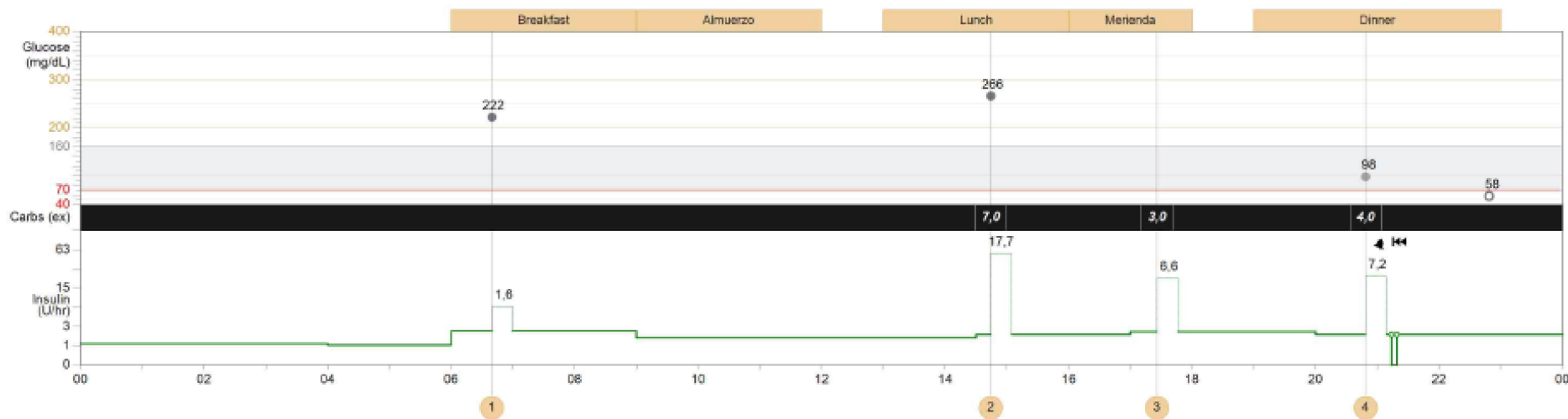
Bolus Events

Bolus Event	1	2	3	4	5				
Time	06:39	06:53	11:09	14:26	22:34				
Bolus Type	Normal	Normal	Normal	Normal	Normal				
Delivered Bolus Norm (U)	1,20	8,75	3,60	13,0	1,23				
+ Square Portion (U, h:mm)	--	--	--	--	--				
Recommended Bolus (U)	1,20	8,75	3,60	13,0	1,23				
Difference (U)	--	--	--	--	--				
Carbs (ex)	--	3,5	3,0	6,0	--				
Carb Ratio Setting (U/ex)	2,5	2,5	1,2	2,0	1,8				
Food Bolus (U)	--	8,75	3,60	12,0	--				
BG (mg/dL)	200	--	--	160	169				
BG Target Setting (mg/dL)	80 - 140	80 - 140	70 - 120	70 - 120	70 - 120				
Insulin Sensitivity Setting (mg/dL per U)	50	50	40	40	40				
Correction Bolus (U)	1,20	--	--	1,00	1,23				
Active Insulin (U)	--	1,20	--	--	--				

Statistics	12/09		11/09 - 20/10	
Avg BG (mg/dL)	152		121 ± 79	
BG Readings	4		159	4,1/day
Readings Above Target	2	50%	41	26%
Readings Below Target	--	0%	58	36%
Sensor Avg (mg/dL)	--		--	
Avg AUC > 160 (mg/dL)	--		--	
Avg AUC < 70 (mg/dL)	--		--	

Daily Carbs (ex)	12,5	15,4 ± 5,3	
Bolus Insulin/Carbs (U/ex)	2,2	2,1	

Total Daily Insulin (U)	70,23		77,13 ± 12,8	
Daily Basal (U)	42,45	60%	44,62	58%
Daily Bolus (U)	27,78	40%	32,51	42%
Fills	--	--	25	144,017U

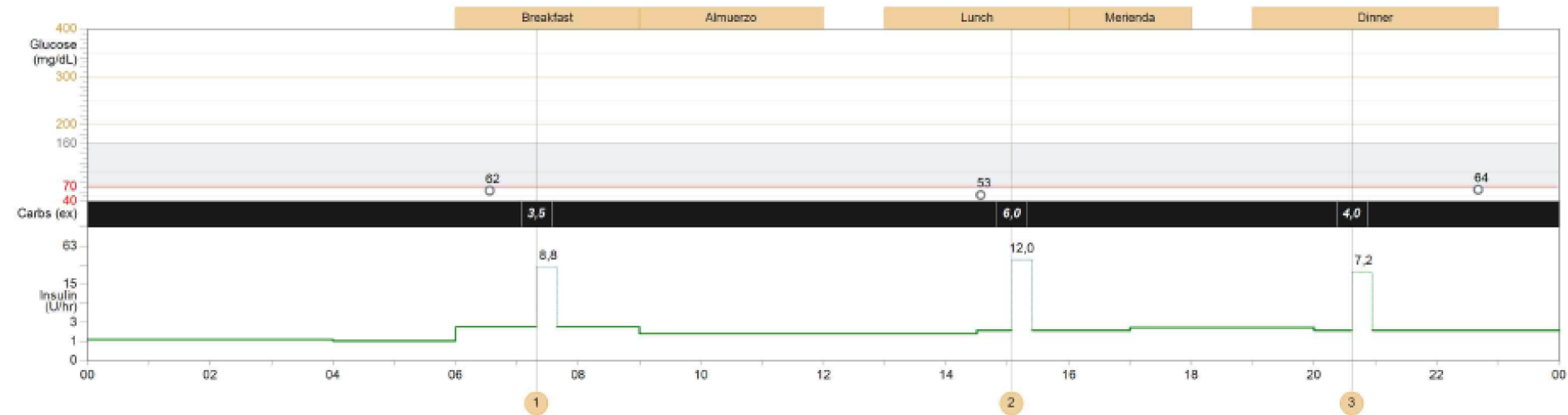


Bolus Events									
Bolus Event	1	2	3	4					
Time	06:39	14:44	17:25	20:48					
Bolus Type	Normal	Normal	Normal	Normal					
Delivered Bolus Norm (U)	1,63	17,7	6,60	7,20					
+ Square Portion (U, h:mm)	--	--	--	--					
Recommended Bolus (U)	1,63	17,7	6,60	7,20					
Difference (U)	--	--	--	--					
Carbs (ex)	--	7,0	3,0	4,0					
Carb Ratio Setting (U/ex)	2,5	2,0	2,2	1,8					
Food Bolus (U)	--	14,0	6,60	7,20					
BG (mg/dL)	222	266	--	98					
BG Target Setting (mg/dL)	80 - 140	70 - 120	70 - 120	70 - 120					
Insulin Sensitivity Setting (mg/dL per U)	50	40	30	30					
Correction Bolus (U)	1,63	3,65	--	--					
Active Insulin (U)	--	--	1,68	--					

Statistics	13/09		11/09 - 20/10	
Avg BG (mg/dL)	161		121 ± 79	
BG Readings	4		159	4,1/day
Readings Above Target	2	50%	41	26%
Readings Below Target	1	25%	58	36%
Sensor Avg (mg/dL)	--		--	
Avg AUC > 160 (mg/dL)	--	--	--	--
Avg AUC < 70 (mg/dL)	--	--	--	--

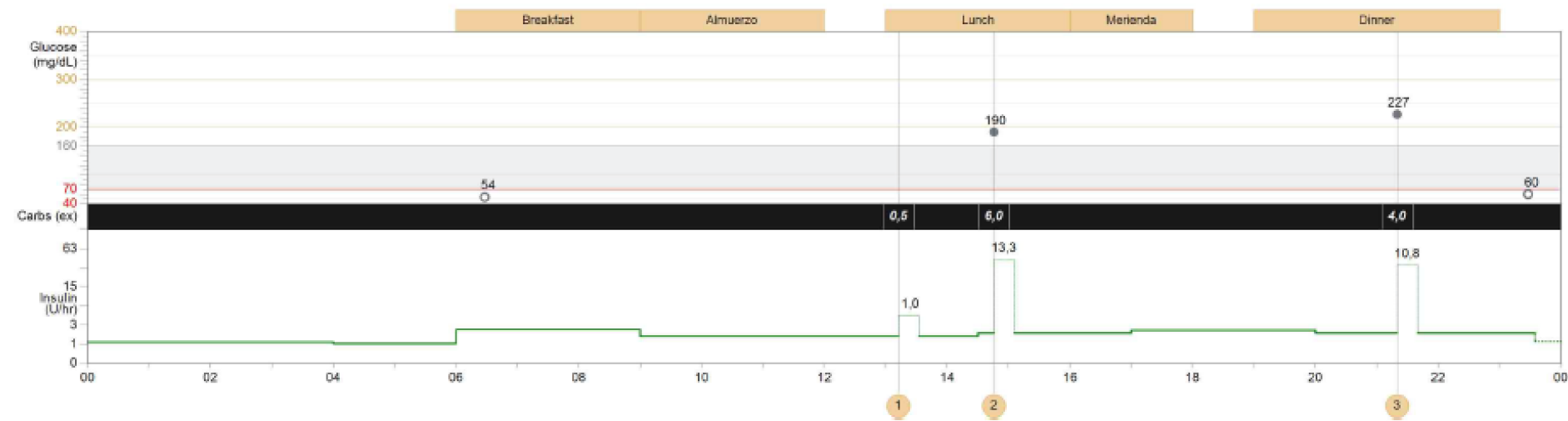
Daily Carbs (ex)	14,0		15,4 ± 5,3	
Bolus Insulin/Carbs (U/ex)	2,4		2,1	

Total Daily Insulin (U)	75,78		77,13 ± 12,8	
Daily Basal (U)	42,70	56%	44,62	58%
Daily Bolus (U)	33,08	44%	32,51	42%
Fills	2	10,737U	25	144,017U



Bolus Events									
Bolus Event	1	2	3						
Time	07:19	15:03	20:36						
Bolus Type	Normal	Normal	Normal						
Delivered Bolus Norm (U)	8,75	12,0	7,20						
+ Square Portion (U, h:mm)	–	–	–						
Recommended Bolus (U)	8,75	12,0	7,20						
Difference (U)	–	–	–						
Carbs (ex)	3,5	6,0	4,0						
Carb Ratio Setting (U/ex)	2,5	2,0	1,8						
Food Bolus (U)	8,75	12,0	7,20						
BG (mg/dL)	–	–	–						
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120						
Insulin Sensitivity Setting (mg/dL per U)	25	40	30						
Correction Bolus (U)	–	–	–						
Active Insulin (U)	–	–	–						

Statistics		14/09	11/09 - 20/10	
Avg BG (mg/dL)		60	121 ± 79	
BG Readings		3	159	4,1/day
Readings Above Target		–	0%	41 26%
Readings Below Target		3	100%	58 36%
Sensor Avg (mg/dL)		–	–	
Avg AUC > 160 (mg/dL)		–	–	–
Avg AUC < 70 (mg/dL)		–	–	–
Daily Carbs (ex)		13,5	15,4 ± 5,3	
Bolus Insulin/Carbs (U/ex)		2,1	2,1	
Total Daily Insulin (U)		70,83	77,13 ± 12,8	
Daily Basal (U)		42,88	61%	44,62 58%
Daily Bolus (U)		27,95	39%	32,51 42%
Fills		–	–	25 144,017U

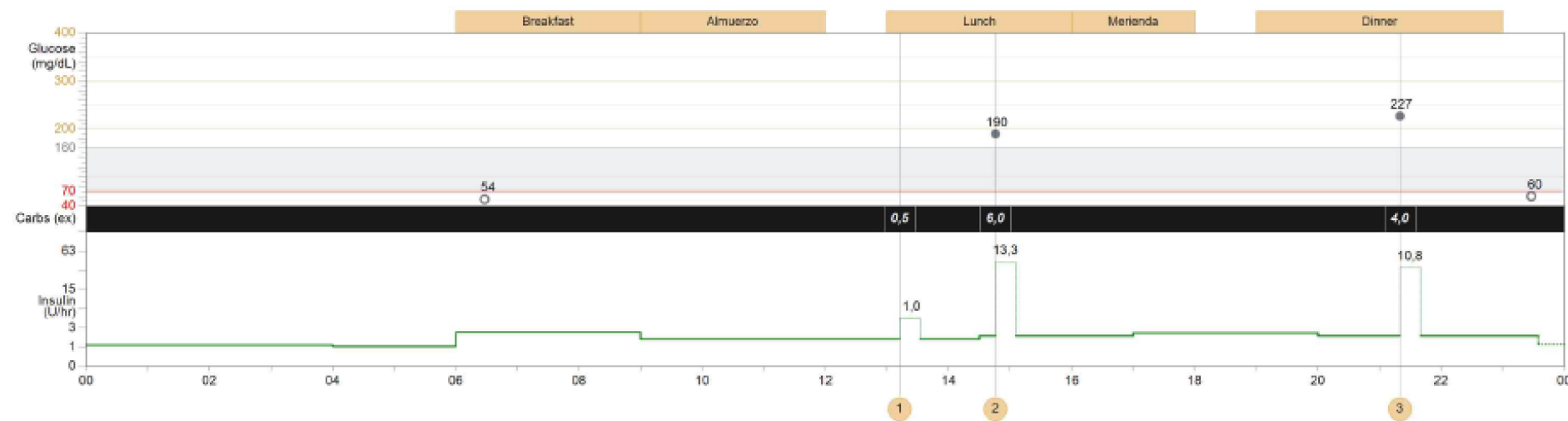


Bolus Events									
Bolus Event	1	2	3						
Time	13:12	14:45	21:19						
Bolus Type	Normal	Normal	Normal						
Delivered Bolus Norm (U)	1,00	13,3	10,8						
+ Square Portion (U, h:mm)	–	–	–						
Recommended Bolus (U)	1,00	13,3	10,8						
Difference (U)	–	–	–						
Carbs (ex)	0,5	6,0	4,0						
Carb Ratio Setting (U/ex)	2,0	2,0	1,8						
Food Bolus (U)	1,00	12,0	7,20						
BG (mg/dL)	–	190	227						
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120						
Insulin Sensitivity Setting (mg/dL per U)	40	40	30						
Correction Bolus (U)	–	1,75	3,55						
Active Insulin (U)	–	0,425	–						

Statistics		15/09	11/09 - 20/10	
Avg BG (mg/dL)		133	121 ± 79	
BG Readings		4	159	4,1/day
Readings Above Target		2	50%	41 26%
Readings Below Target		2	50%	58 36%
Sensor Avg (mg/dL)		--	--	
Avg AUC > 160 (mg/dL)		--	--	--
Avg AUC < 70 (mg/dL)		--	--	--

Daily Carbs (ex)		10,5	15,4 ± 5,3
Bolus Insulin/Carbs (U/ex)		2,4	2,1

Total Daily Insulin (U)		67,63	77,13 ± 12,8
Daily Basal (U)		42,55	63% 44,62 58%
Daily Bolus (U)		25,08	37% 32,51 42%
Fills		--	25 144,017U

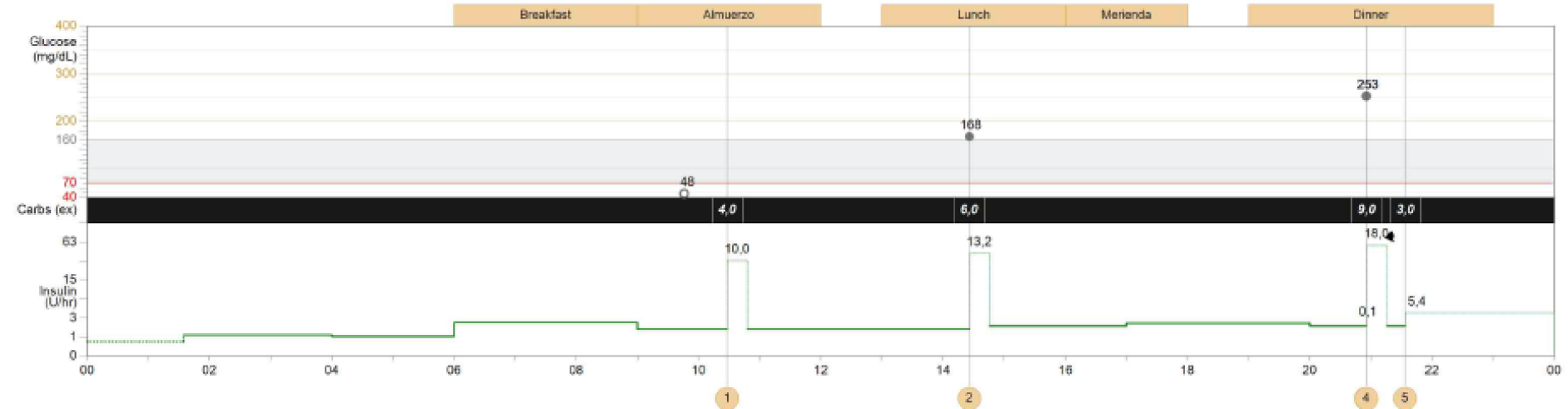


Bolus Events									
Bolus Event	1	2	3						
Time	13:12	14:45	21:19						
Bolus Type	Normal	Normal	Normal						
Delivered Bolus Norm (U)	1,00	13,3	10,8						
+ Square Portion (U, h:mm)	–	–	–						
Recommended Bolus (U)	1,00	13,3	10,8						
Difference (U)	–	–	–						
Carbs (ex)	0,5	6,0	4,0						
Carb Ratio Setting (U/ex)	2,0	2,0	1,8						
Food Bolus (U)	1,00	12,0	7,20						
BG (mg/dL)	–	190	227						
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120						
Insulin Sensitivity Setting (mg/dL per U)	40	40	30						
Correction Bolus (U)	–	1,75	3,55						
Active Insulin (U)	–	0,425	–						

Statistics		15/09	11/09 - 20/10	
Avg BG (mg/dL)		133	121	± 79
BG Readings		4	159	4,1/day
Readings Above Target		2	50%	41 26%
Readings Below Target		2	50%	58 36%
Sensor Avg (mg/dL)		--	--	--
Avg AUC > 160 (mg/dL)		--	--	--
Avg AUC < 70 (mg/dL)		--	--	--

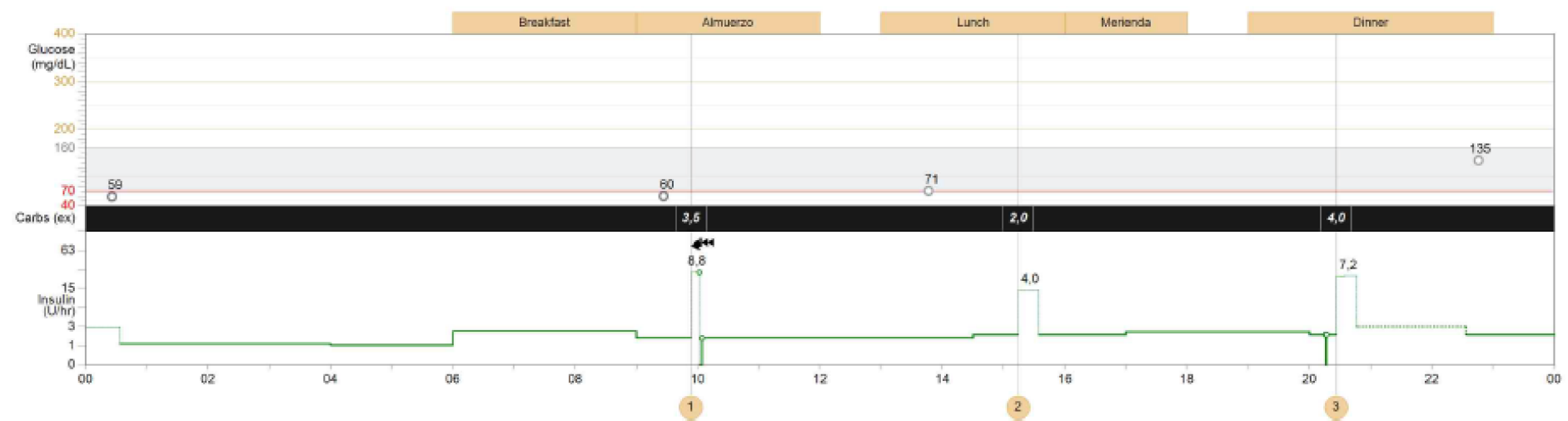
Daily Carbs (ex)		10,5	15,4 ± 5,3
Bolus Insulin/Carbs (U/ex)		2,4	2,1

Total Daily Insulin (U)		67,63	77,13 ± 12,8
Daily Basal (U)		42,55	63% 44,62 58%
Daily Bolus (U)		25,08	37% 32,51 42%
Fills		--	25 144,017U



Bolus Events									
Bolus Event	1	2	3	4	5				
Time	10:28	14:25	20:55	20:55	21:33				
Bolus Type	Normal	Normal	Normal	Normal	Square				
Delivered Bolus Norm (U)	10,0	13,2	0,100	18,0	--				
+ Square Portion (U, h:mm)	--	--	--	--	5,40, 3:00				
Recommended Bolus (U)	10,0	13,2	22,4	20,5	5,40				
Difference (U)	--	--	-22,325	-2,525	--				
Carbs (ex)	4,0	6,0	10,0	9,0	3,0				
Carb Ratio Setting (U/ex)	2,5	2,0	1,8	1,8	1,8				
Food Bolus (U)	10,0	12,0	18,0	16,2	5,40				
BG (mg/dL)	--	168	253	253	--				
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120				
Insulin Sensitivity Setting (mg/dL per U)	40	40	30	30	30				
Correction Bolus (U)	--	1,20	4,43	4,43	--				
Active Insulin (U)	--	--	--	0,100	15,8				

Statistics	16/09		11/09 - 20/10	
Avg BG (mg/dL)	181		121 ± 79	
BG Readings	4		159	4,1/day
Readings Above Target	3	75%	41	26%
Readings Below Target	1	25%	58	36%
Sensor Avg (mg/dL)	--		--	
Avg AUC > 160 (mg/dL)	--	--	--	--
Avg AUC < 70 (mg/dL)	--	--	--	--
Daily Carbs (ex)	32,0		15,4 ± 5,3	
Bolus Insulin/Carbs (U/ex)	1,4		2,1	
Total Daily Insulin (U)	87,80		77,13 ± 12,8	
Daily Basal (U)	42,11	48%	44,62	58%
Daily Bolus (U)	45,70	52%	32,51	42%
Fills	--	--	25	144,017U

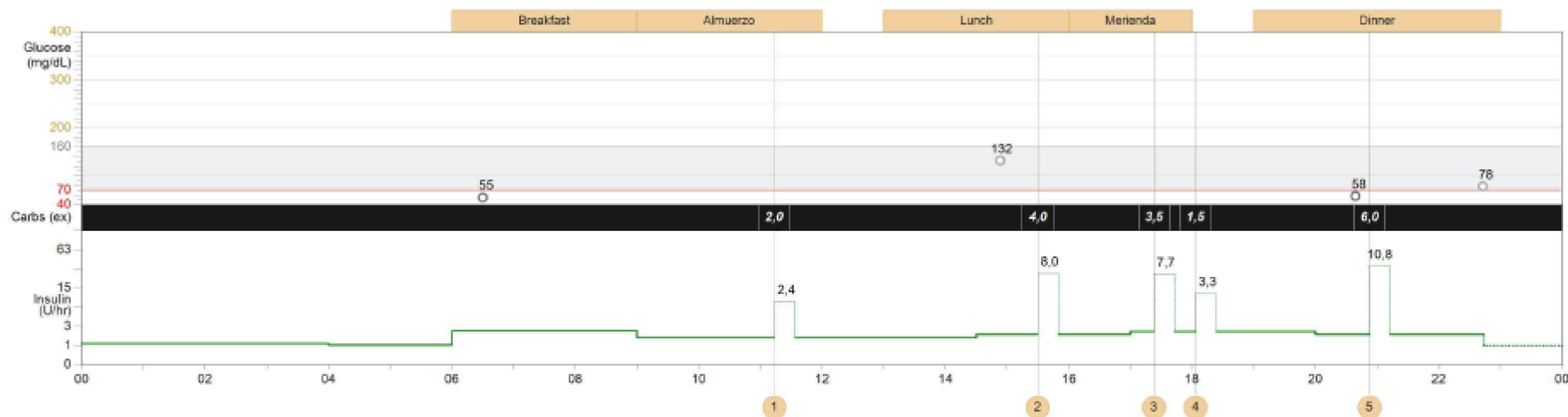


Bolus Events									
Bolus Event	1	2	3						
Time	09:53	15:14	20:26						
Bolus Type	Normal	Normal	Normal						
Delivered Bolus Norm (U)	8,75	4,00	7,20						
+ Square Portion (U, h:mm)	--	--	--						
Recommended Bolus (U)	8,75	4,00	7,20						
Difference (U)	--	--	--						
Carbs (ex)	3,5	2,0	4,0						
Carb Ratio Setting (U/ex)	2,5	2,0	1,8						
Food Bolus (U)	8,75	4,00	7,20						
BG (mg/dL)	--	--	--						
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120						
Insulin Sensitivity Setting (mg/dL per U)	25	40	30						
Correction Bolus (U)	--	--	--						
Active Insulin (U)	--	--	--						

Statistics	17/09		11/09 - 20/10	
Avg BG (mg/dL)	81		121 ± 79	
BG Readings	4		159	4,1/day
Readings Above Target	--	0%	41	26%
Readings Below Target	2	50%	58	36%
Sensor Avg (mg/dL)	--		--	
Avg AUC > 160 (mg/dL)	--	--	--	--
Avg AUC < 70 (mg/dL)	--	--	--	--

Daily Carbs (ex)	9,5		15,4 ± 5,3	
Bolus Insulin/Carbs (U/ex)	2,2		2,1	

Total Daily Insulin (U)	65,75		77,13 ± 12,8	
Daily Basal (U)	44,80	68%	44,62	58%
Daily Bolus (U)	20,96	32%	32,51	42%
Fills	2	13,265U	25	144,017U



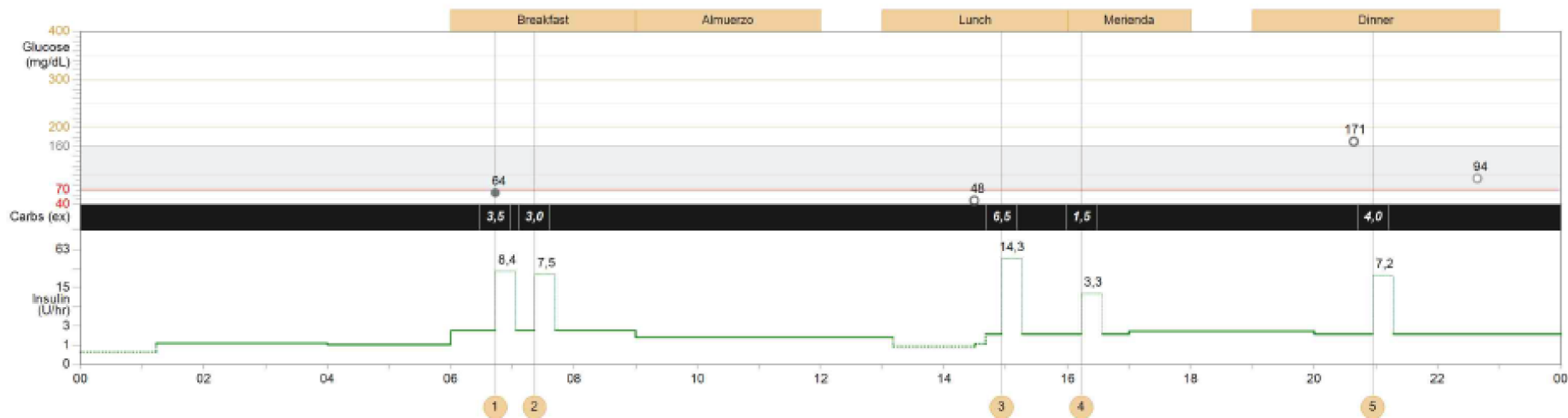
Bolus Events

Bolus Event	1	2	3	4	5					
Time	11:13	15:29	17:22	18:03	20:52					
Bolus Type	Normal	Normal	Normal	Normal	Normal					
Delivered Bolus Norm (U)	2,40	8,00	7,70	3,30	10,8					
+ Square Portion (U, h:mm)	--	--	--	--	--					
Recommended Bolus (U)	2,40	8,00	7,70	3,30	10,8					
Difference (U)	--	--	--	--	--					
Carbs (ex)	2,0	4,0	3,5	1,5	6,0					
Carb Ratio Setting (U/ex)	1,2	2,0	2,2	2,2	1,8					
Food Bolus (U)	2,40	8,00	7,70	3,30	10,8					
BG (mg/dL)	--	--	--	--	--					
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120					
Insulin Sensitivity Setting (mg/dL per U)	40	40	30	30	30					
Correction Bolus (U)	--	--	--	--	--					
Active Insulin (U)	--	--	2,35	7,28	0,225					

Statistics	18/09	11/09 - 20/10
Avg BG (mg/dL)	81	121 ± 79
BG Readings	4	159 4,1/day
Readings Above Target	-- 0%	41 26%
Readings Below Target	2 50%	58 36%
Sensor Avg (mg/dL)	--	--
Avg AUC > 160 (mg/dL)	--	--
Avg AUC < 70 (mg/dL)	--	--

Daily Carbs (ex)	17,0	15,4 ± 5,3
Bolus Insulin/Carbs (U/ex)	1,9	2,1

Total Daily Insulin (U)	73,80	77,13 ± 12,8
Daily Basal (U)	41,60 56%	44,62 58%
Daily Bolus (U)	32,20 44%	32,51 42%
Fills	--	25 144,017U

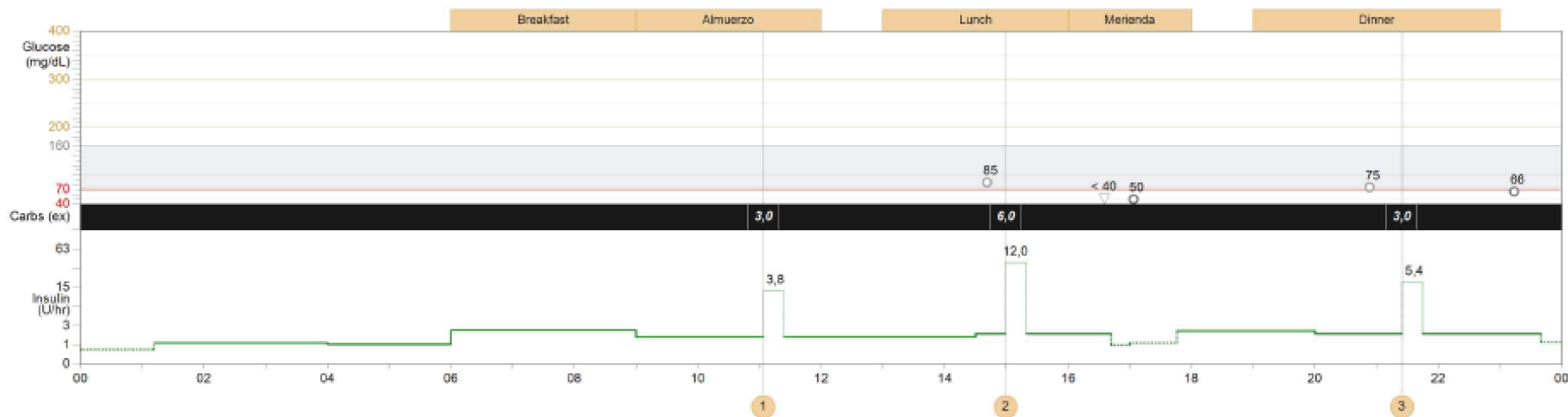


Bolus Events									
Bolus Event	1	2	3	4	5				
Time	06:43	07:21	14:55	16:13	20:56				
Bolus Type	Normal	Normal	Normal	Normal	Normal				
Delivered Bolus Norm (U)	8,43	7,50	14,3	3,30	7,20				
+ Square Portion (U, h:mm)	--	--	--	--	--				
Recommended Bolus (U)	8,43	7,50	13,0	3,30	7,20				
Difference (U)	--	--	1,33	--	--				
Carbs (ex)	3,5	3,0	6,5	1,5	4,0				
Carb Ratio Setting (U/ex)	2,5	2,5	2,0	2,2	1,8				
Food Bolus (U)	8,75	7,50	13,0	3,30	7,20				
BG (mg/dL)	64	--	--	--	--				
BG Target Setting (mg/dL)	80 - 140	70 - 120	70 - 120	70 - 120	70 - 120				
Insulin Sensitivity Setting (mg/dL per U)	50	25	40	30	30				
Correction Bolus (U)	-0,325	--	--	--	--				
Active Insulin (U)	--	7,13	--	8,18	--				

Statistics		19/09		11/09 - 20/10	
Avg BG (mg/dL)		94		121 ± 79	
BG Readings		4		159	4,1/day
Readings Above Target		1	25%	41	26%
Readings Below Target		2	50%	58	36%
Sensor Avg (mg/dL)		--		--	
Avg AUC > 160 (mg/dL)		--	--	--	--
Avg AUC < 70 (mg/dL)		--	--	--	--

Daily Carbs (ex)		18,5		15,4 ± 5,3	
Bolus Insulin/Carbs (U/ex)		2,2		2,1	

Total Daily Insulin (U)		81,80		77,13 ± 12,8	
Daily Basal (U)		41,05	50%	44,62	58%
Daily Bolus (U)		40,75	50%	32,51	42%
Fills		--	--	25	144,017U

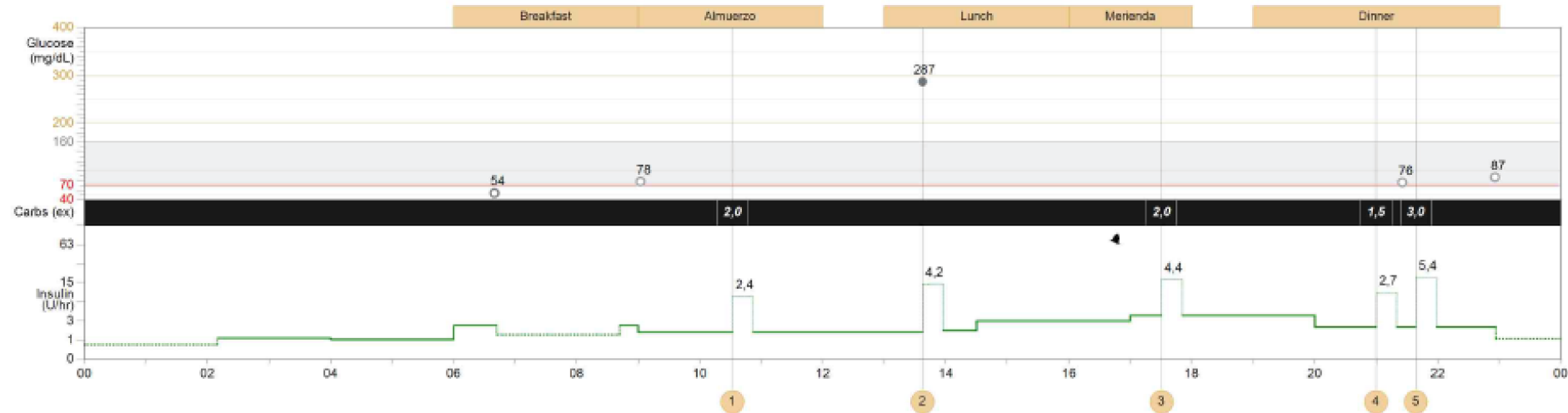


Bolus Events									
Bolus Event	1	2	3						
Time	11:03	14:59	21:24						
Bolus Type	Normal	Normal	Normal						
Delivered Bolus Norm (U)	3,80	12,0	5,40						
+ Square Portion (U, h:mm)	—	—	—						
Recommended Bolus (U)	3,60	12,0	5,40						
Difference (U)	0,200	—	—						
Carbs (ex)	3,0	6,0	3,0						
Carb Ratio Setting (U/ex)	1,2	2,0	1,8						
Food Bolus (U)	3,60	12,0	5,40						
BG (mg/dL)	—	—	—						
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120						
Insulin Sensitivity Setting (mg/dL per U)	40	40	30						
Correction Bolus (U)	—	—	—						
Active Insulin (U)	—	—	—						

Statistics	22/09		11/09 - 20/10	
Avg BG (mg/dL)	63		121 ± 79	
BG Readings	5		159	4,1/day
Readings Above Target	—	0%	41	26%
Readings Below Target	3	60%	58	36%
Sensor Avg (mg/dL)	—		—	
Avg AUC > 160 (mg/dL)	—		—	
Avg AUC < 70 (mg/dL)	—		—	

Daily Carbs (ex)	12,0	15,4 ± 5,3
Bolus Insulin/Carbs (U/ex)	1,8	2,1

Total Daily Insulin (U)	62,08		77,13 ± 12,8	
Daily Basal (U)	40,88	66%	44,62	58%
Daily Bolus (U)	21,20	34%	32,51	42%
Fills	--	--	25	144,017U



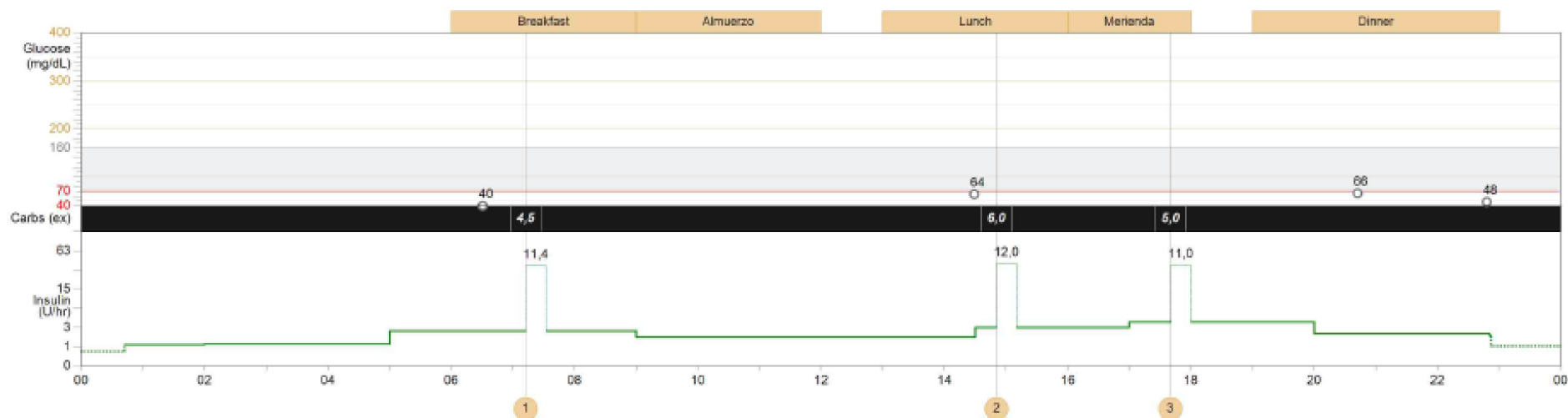
Bolus Events									
Bolus Event	1	2	3	4	5				
Time	10:32	13:37	17:30	20:59	21:38				
Bolus Type	Normal	Normal	Normal	Normal	Normal				
Delivered Bolus Norm (U)	2,40	4,18	4,40	2,70	5,40				
+ Square Portion (U, h:mm)	--	--	--	--	--				
Recommended Bolus (U)	2,40	4,18	4,40	2,70	5,40				
Difference (U)	--	--	--	--	--				
Carbs (ex)	2,0	--	2,0	1,5	3,0				
Carb Ratio Setting (U/ex)	1,2	2,0	2,2	1,8	1,8				
Food Bolus (U)	2,40	--	4,40	2,70	5,40				
BG (mg/dL)	--	287	--	--	--				
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120				
Insulin Sensitivity Setting (mg/dL per U)	40	40	30	30	30				
Correction Bolus (U)	--	4,18	--	--	--				
Active Insulin (U)	--	--	--	--	2,35				

Statistics	23/09		11/09 - 20/10	
Avg BG (mg/dL)	116		121 ± 79	
BG Readings	5		159	4,1/day
Readings Above Target	1	20%	41	26%
Readings Below Target	1	20%	58	36%
Sensor Avg (mg/dL)	--		--	
Avg AUC > 160 (mg/dL)	--	--	--	--
Avg AUC < 70 (mg/dL)	--	--	--	--
Daily Carbs (ex)	8,5		15,4 ± 5,3	
Bolus Insulin/Carbs (U/ex)	2,2		2,1	
Total Daily Insulin (U)	65,88		77,13 ± 12,8	
Daily Basal (U)	46,80	71%	44,62	58%
Daily Bolus (U)	19,08	29%	32,51	42%
Fills	--	--	25	144,017U



Bolus Events									
Bolus Event	1	2	3	4	5	6			
Time	09:27	13:44	14:45	17:10	21:16	22:52			
Bolus Type	Normal	Normal	Normal	Normal	Normal	Normal			
Delivered Bolus Norm (U)	15,0	5,83	8,00	11,0	3,60	4,15			
+ Square Portion (U, h:mm)	–	–	–	--	--	–			
Recommended Bolus (U)	15,0	5,83	8,00	11,0	3,60	4,15			
Difference (U)	–	–	–	--	--	–			
Carbs (ex)	0,0	–	4,0	5,0	2,0	–			
Carb Ratio Setting (U/ex)	2,5	2,0	2,0	2,2	1,8	1,8			
Food Bolus (U)	15,0	–	8,00	11,0	3,60	–			
BG (mg/dL)	114	353	–	--	--	340			
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120	70 - 120			
Insulin Sensitivity Setting (mg/dL per U)	25	40	40	30	30	40			
Correction Bolus (U)	–	5,83	–	--	--	5,50			
Active Insulin (U)	–	–	3,88	1,05	--	1,35			

Statistics	24/09		11/09 - 20/10	
Avg BG (mg/dL)	299		121 ± 79	
BG Readings	4		159	4,1/day
Readings Above Target	3	75%	41	26%
Readings Below Target	–	0%	58	36%
Sensor Avg (mg/dL)	--		--	
Avg AUC > 160 (mg/dL)	–	–	–	–
Avg AUC < 70 (mg/dL)	–	–	–	–
Daily Carbs (ex)	17,0		15,4 ± 5,3	
Bolus Insulin/Carbs (U/ex)	2,8		2,1	
Total Daily Insulin (U)	102,25		77,13 ± 12,8	
Daily Basal (U)	54,68	53%	44,62	58%
Daily Bolus (U)	47,58	47%	32,51	42%
Fills	2	12,849U	25	144,017U



Bolus Events

Bolus Event	1	2	3						
Time	07:12	14:50	17:40						
Bolus Type	Normal	Normal	Normal						
Delivered Bolus Norm (U)	11,4	12,0	11,0						
+ Square Portion (U, h:mm)	—	—	—						
Recommended Bolus (U)	11,3	12,0	11,0						
Difference (U)	0,125	—	—						
Carbs (ex)	4,5	6,0	5,0						
Carb Ratio Setting (U/ex)	2,5	2,0	2,2						
Food Bolus (U)	11,3	12,0	11,0						
BG (mg/dL)	—	—	—						
BG Target Setting (mg/dL)	70 - 120	70 - 120	70 - 120						
Insulin Sensitivity Setting (mg/dL per U)	25	40	30						
Correction Bolus (U)	—	—	—						
Active Insulin (U)	—	—	0,825						

Statistics	27/09	11/09 - 20/10
Avg BG (mg/dL)	55	121 ± 79
BG Readings	4	159 4,1/day
Readings Above Target	— 0%	41 26%
Readings Below Target	4 100%	58 36%
Sensor Avg (mg/dL)	—	—
Avg AUC > 160 (mg/dL)	— —	— —
Avg AUC < 70 (mg/dL)	— —	— —

Daily Carbs (ex)	15,5	15,4 ± 5,3
Bolus Insulin/Carbs (U/ex)	2,2	2,1

Total Daily Insulin (U)	86,85	77,13 ± 12,8
Daily Basal (U)	52,48 60%	44,62 58%
Daily Bolus (U)	34,38 40%	32,51 42%
Fills	— —	25 144,017U



		Fecha	Edad	Edad ósea	Tanner	Peso	Z	Talla	Z	ICM	Z	HbA 1c DCA2000	HbA 1c	UI / kg / día	Tens Art	Fondo ojo	Fecha Analítica	Cambios
✖	➡	20/10/2017	13,37			72,5	1,81	172,5	2,13	24,36	0,92	6,3		0,84				
✖	➡	16/06/2017	13,02			71	1,83	172,0	2,46	24,00	0,85	6,6		1,22				
✖	➡	01/03/2017	12,73			66,8	1,45	170,3	2,19	23,03	0,61	6,7		0,98	102/62			
✖	➡	30/11/2016	12,48			60,5	1,07	168,9	2,08	21,21	0,29	7,3		1,00				
✖	➡	24/08/2016	12,21			55	1,01	166,6	2,27	19,82	0,09		6,9	0,89				
✖	➡	24/05/2016	11,96															
✖	➡	17/05/2016	11,94															
✖	➡	09/05/2016	11,92			43,3	-0,20	163,3	1,76	16,24	-0,97			0,79				
✖	➡	21/03/2016	11,79										6,9					
✖	➡	23/02/2016	11,71															
✖	➡	10/02/2016	11,68															
✖	➡	04/02/2016	11,66															
✖	➡	03/02/2016	11,66															
✖	➡	28/01/2016	11,64															
✖	➡	25/01/2016	11,63			40,5	-0,33	160,6	1,68	15,70	-1,11		7,3	0,71				ISCI
✖	➡	02/12/2015	11,48															
✖	➡	28/10/2015	11,39			40	-0,38						7,2	0,00				

1865

Raciones:	Lacteos	Proteina	Verdura	Harina	Fruta	Grasas
Desayuno				2	2	1
Almuerzo		1		?		
Comida		2	1	4	2	1
Merienda		1		4		
Cena		2	1	4	1	1
Recena						

Historia Actual	Exploración	P.Complementarias	Tratamiento	Notas - Intereses	Recomendaciones
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Alimentación	Actividad	M.D.I.	ISCI / Calculador	ADO	Otros	Resumen Tto
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Raciones:	Lacteos	Proteina	Verdura	Harina	Fruta	Grasas
Desayuno	1			1		1
Almuerzo						
Comida		2	1	4	2	1
Merienda				2		
Cena		2	1	2	1	1
Recena						

Historia Actual

Exploración

P.Complementarias

Tratamiento

Notas - Intereses

Recomendaciones

Alimentación

Actividad

M.D.I.

ISCI / Calculador

ADO

Otros

Resumen Tto

Bolo y Basal

Pauta Alternativa

Formación

Informe Pauta ISCI ☒Insertar bolos en informe ☐

Fecha de Inicio 28/01/2016

Bolo	UI/R HC			
	Hora	UI / Rac	HC/UI	Bolo
Nocturna	24:00	1,80	5,6	
Desayuno	6:30	2,50	4,0	5,00
Almuerzo	10:30	1,20	8,3	0,00
Comida	12:30	2,00	5,0	12,00
Merienda	16:00	2,20	4,5	4,40
Cena	19:00	1,80	5,6	5,40
Factor de Corrección:				
Inicio	Prog	Objetivo de glucemia		
0:00	40			
4:00	50	Inicio	Prog	
7:00	25	0	80 - 140	
10:00	40	7	70 - 120	
16:00	30	Duración de Insulina		
22:30	40			
		3		

Sensibilidad
Teórica por
tramo

28

30

22

25

23

24

24

Basal 1

Basal 2

Basal 3

Basal 4

Basal 5

Laborable

Desde: Hasta: Ritmo:

0:00 4:00 1,000

4:00 6:00 0,900

6:00 9:00 1,900

9:00 14:30 1,450

14:30 17:00 1,700

17:00 20:00 1,500

20:00 24:00 1,500

Suma Basal 34,225

Entrega Material

Actualizar Bolus

Total bolos	26,80
Total basal	34,23
Insulina diaria	61,03
%Bolus	73,74%
Factor Corrección	21,46
Indice de Corrección	2000