LINFOMA DE HODGKIN EN PACIENTE EMBARAZADA.

ADECUACIÓN DE DOSIS Y ANTIEMESIS

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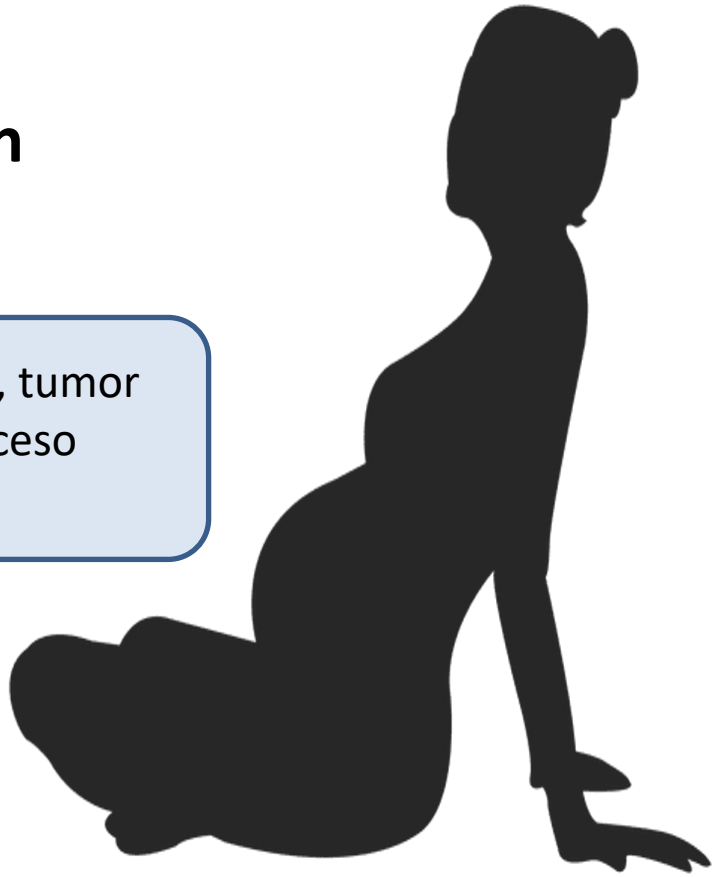
ANTECEDENTES

- Mujer 36 años que refiere coxalgia y dolor irradiado a la pierna izquierda, con importantes adenopatías
- Es derivada a nuestro centro para estudio tras hallazgo de **lesión ósea en pala iliaca derecha,** en TAC de pelvis.

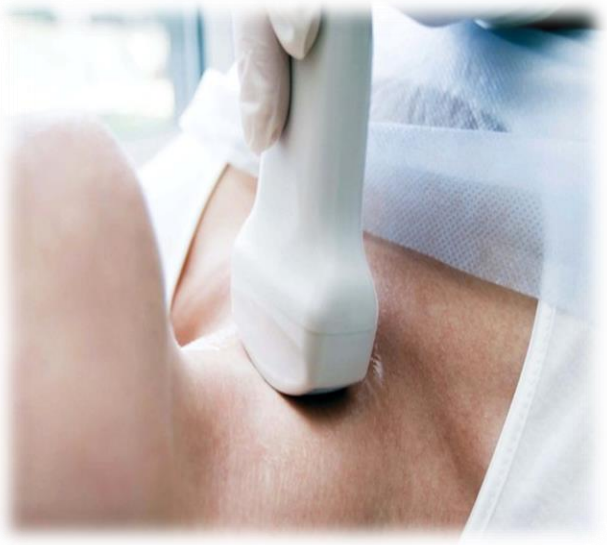
Compatible con lesiones metastásicas, plasmocitoma, tumor óseo de tipo osteosarcoma, condrosarcoma o proceso infeccioso

- Embarazada en el momento del estudio



PRUEBAS VALORACIÓN OBJETIVA

- TAC pelvis inicial
- Resonancia magnética (RM) con contraste:
- Biopsia guiada con aguja gruesa (BAG) de lesión sacro ilíaca derecha
- Ecografía de partes blandas y BAG con anestesia espinal (12 semanas de gestación, autorizada por obstetricia)
- RM de pelvis sin contraste:
- Ecografía de cuello:
- Cirugía menor
- Biopsia de adenopatías inguinales



6 MESES

Estudio inmunohistoquímico: La población neoplásica no revela expresión para: CD20, CD79a y CD3. Expresa: **CD30**. Una subpoblación, de ellas, expresa: **CD15**. Sobreexpresa, de forma intensa nuclear: **p-53** y también: **Ki-67.** No se identifica expresión para: EBER. Muestran expresión para: **bcl2.**

PRUEBAS VALORACIÓN OBJETIVA

- **TAC pelvis inicial**
- **Resonancia magnética (RM) con contraste:**
- **Biopsia guiada con aguja gruesa (BAG) de lesión sacro ilíaca derecha**

DIAGNÓSTICO PRINCIPAL: Linfoma de Hodgkin esclerosis nodular estadio IV-A. Índice de Hasenclever (IPS): 3
DIAGNOSTICO SECUNDARIO: Gestante de 26 semanas al diagnóstico

Estudio inmunohistoquímico: La población neoplásica no revela expresión para: CD20, CD79a y CD3. Expresa: **CD30**. Una subpoblación, de ellas, expresa: **CD15**. Sobreexpresa, de forma intensa nuclear: **p-53** y también: **Ki-67.** No se identifica expresión para: EBER. Muestran expresión para: **bcl2.**

PRUEBAS VALORACIÓN OBJETIVA

- **Bioquímica general al diagnóstico:** Valores dentro de la normalidad, excepto: albúmina sérica 2,9 g/dL (3,5-5,2)
- **Control de anemia y hemograma al diagnóstico**

Hierro	***23 ug/dL**	**37-145**
Ferritina	64ng/dL	15-150
Transferrina	236mg/dL	200-360
Índice de saturación de transferrina	*6.8%	24-40
Folato	10.4 ng/ml	3.8-16
Vitamina B12	*> 20000 pg/ml	191-663

PRUEBAS VALORACIÓN OBJETIVA

Hemoglobina	***8,2 g/dL**	**12-16**
Hematíes	*3,1 $x10^6$/uL	4-5,2
Leucocitos	*12,78 $x10^3$/uL	4,5-11
Neutrófilos	*10,51 $x10^3$/uL	1,8-7,70
Linfocitos	1,79 $x10^3$/uL	1-4
Plaquetas	*372 $x10^3$/uL	150-350

VSG 56 mm/h (0-20).

Serología: VIH, VHB, VHC: negativas. Serologías toxoplasma, VEB, LUES, toxoplasma y CMV: negativas.

PRUEBAS VALORACIÓN OBJETIVA

ÍNDICE DE HASENCLEVER (IPS): 3.

En estadios avanzados (III-IV):

Los factores de riesgo, son los definidos en el **Índice pronóstico internacional de Hasenclever (IPS)** siendo considerados de alto riesgo pacientes con score IPS>4.

Albúmina sérica <4 g/dL (1 punto)
Hemoglobina <10.5 g/dL (1 punto)
Sexo masculino (1 punto)
Enfermedad en estadio IV según la clasificación Ann Arbor (1 punto)
Edad >=45 años (1 punto)
Recuento leucocitario >=15.000/mm^3 (1 punto)
Recuento de linfocitos <600/mm^3 o <8 por ciento de recuento leucocitario (1 punto)

TRATAMIENTO

1. ¿Esquema en embarazada?

2. ¿Descriptor de **peso adecuado**?

3. **Pauta antiemética**

SERVICIO HEMATOLOGÍA → SERVICIO FARMACIA

TRATAMIENTO

1. ¿Esquema en embarazada?

2. ¿Descriptor de peso adecuado?

3. Pauta antiemética

How Is Hodgkin Lymphoma in Pregnancy Best Treated?

ASH Evidence-based Review 2008

Veronika Bachanova[1] and Joseph M. Connors[2]

[1]Department of Hematology, Oncology and Transplantation, University of Minnesota, Minneapolis, MN; [2]Department of Medical Oncology, BC Cancer Agency and the University of British Columbia, Vancouver, BC, Canada

Evidence to support a chemotherapy recommendation for pregnant patients with HL is scant. Based upon a comprehensive literature review we conclude that ABVD is a regimen of choice (Grade 1C recommendation) if multiagent chemotherapy is to be used. ABVD appears to be a safe for fetal development when used in any trimester; however, even in aggregate, the reported cases are few and moderate levels of delayed toxicity in the child may well have been missed. Use of alkylating agents, especially in the first trimester, may be associated with fetal demise or teratogenicity and should be avoided. Continued efforts to collect data on all HL patients who elect to continue coincident pregnancy and long-term follow up of these patients and their children will be of great value to make broad recommendations. We suggest the establishment of a central registry of children born to HL patients to capture the long-term follow up.

Disclosures

Esquema ABVD cada 28 días	
DIA 1	**DIA 15**
Fosaprepitant 150mg IV	Fosaprepitant 150mg IV
Dexametasona 12 mg IV	Dexametasona 12 mg IV
Ondansetron 8 mg IV	Ondansetron 8 mg IV
Doxorubicina 25mg/m^2/ día	**Doxorubicina 25mg/m^2/ día**
Bleomicina 10000UI/ m^2/ día	**Bleomicina 10000UI/ m^2/ día**
Vinblastina 6mg m^2/ día	**Vinblastina 6mg m^2/ día**
Dacarbacina 375mg m^2/ día	**Dacarbacina 375mg m^2/ día**
DÍA 2	**DÍA 16**
Dexametasona 8mg vo	Dexametasona 8mg vo
DÍAS 3 y 4	**DÍAS 17 y 18**
Dexametasona 8mg/12h vo	Dexametasona 8mg/12h vo

TRATAMIENTO

1. ¿Esquema en embarazada?

2. ¿Descriptor de peso adecuado?

3. Pauta antiemética

¿PESO IDEAL O PESO REAL?

Use of chemotherapy during human pregnancy

Elyce Cardonick and Audrey Iacobucci

When cancer is diagnosed in a pregnant woman, life-saving chemotherapy for the mother poses life-threatening concerns for the developing fetus. Depending on the type of cancer and the stage at diagnosis, chemotherapy cannot necessarily be delayed until after delivery. Women diagnosed with acute lymphoblastic leukaemia who decline both termination and chemotherapy often die with the previable fetus in utero. Safe use of chemotherapy, especially during the second and third trimester, have been reported, and pregnant women with cancer can accept therapy without definite neonatal harm. Here, we review the use of chemotherapy in pregnancy by trimester of exposure and summarise neonatal outcomes, including malformations, perinatal complications, and oldest age of neonatal follow-up. We will also discuss the modes of action of the drugs used and look at the multiagent regimens recommended for use during pregnancy.

Lancet Oncol 2004; **5:** 283–91

Cancer develops in about one per 1000 pregnant women. The most frequent cancers are breast, cervical, lymphoma, and melanoma.[1] If chemotherapy cannot be delayed until after delivery, and if termination is not desired, chemotherapy can be considered.

The teratogenicity of any drug depends on the timing of exposure, the dose, and the characteristics affecting

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Figure 1. Computer artwork of a human fetus developing in the uterus.

Chemotherapy exposure in utero

Pharmacokinetic toxic effects versus subtherapeutic doses

No pharmacokinetic studies have been done in pregnant women receiving chemotherapy. Pregnant women receive similar weight-based doses as women who are not pregnant, adjusted with the continuing weight gain. The increased blood volume (by almost 50%), and increased renal clearance might decrease active drug concentrations compared with women who are not pregnant and who are the same weight. Increased drug clearance from the body can lead to a reduced area under the concentration-X time curve.[68] A faster hepatic mixed-function oxidase system might also lower drug concentrations, and changes in gastrointestinal function can affect drug absorption. The volume of distribution, peak drug concentration, and half-life of administration is also sometimes changed during pregnancy. Plasma albumin decreases, increasing the amount of unbound active drug; however, oestrogen increases other plasma proteins, which might decrease active drug fractions. Hopefully, this mechanism will not compromise the effectiveness of the drug for curing pregnant women with malignant diseases. Anecdotally, patients in our registry have reported more frequent nausea, vomiting, fatigue, alopecia, and neutropenia during postpartum chemotherapy compared with identical antenatal treatment. Whether this difference in side-effects is due to lower peak or free-drug concentrations during pregnancy is unknown. Zemlickis and colleagues[69] raised a concern for toxic effects in pregnant women undergoing chemotherapy by showing higher concentrations of free cisplatin in pregnant women compared with women who were not pregnant, but all were asymptomatic.

¿PESO IDEAL O **PESO REAL?**

Use of chemotherapy during human pregnancy

SE UTILIZA EL PESO REAL

- **Aumento de volumen sanguíneo** (en casi un 50%)
- **Aumento del aclaramiento renal** en gestantes, que puede disminuir las concentraciones activas de fármaco en comparación con las mujeres que no están embarazadas y que tienen el mismo peso.

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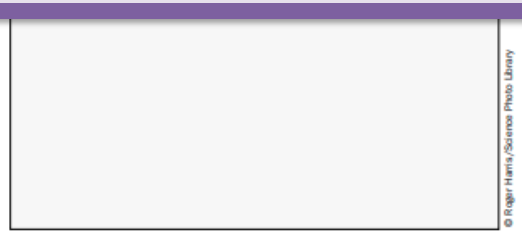

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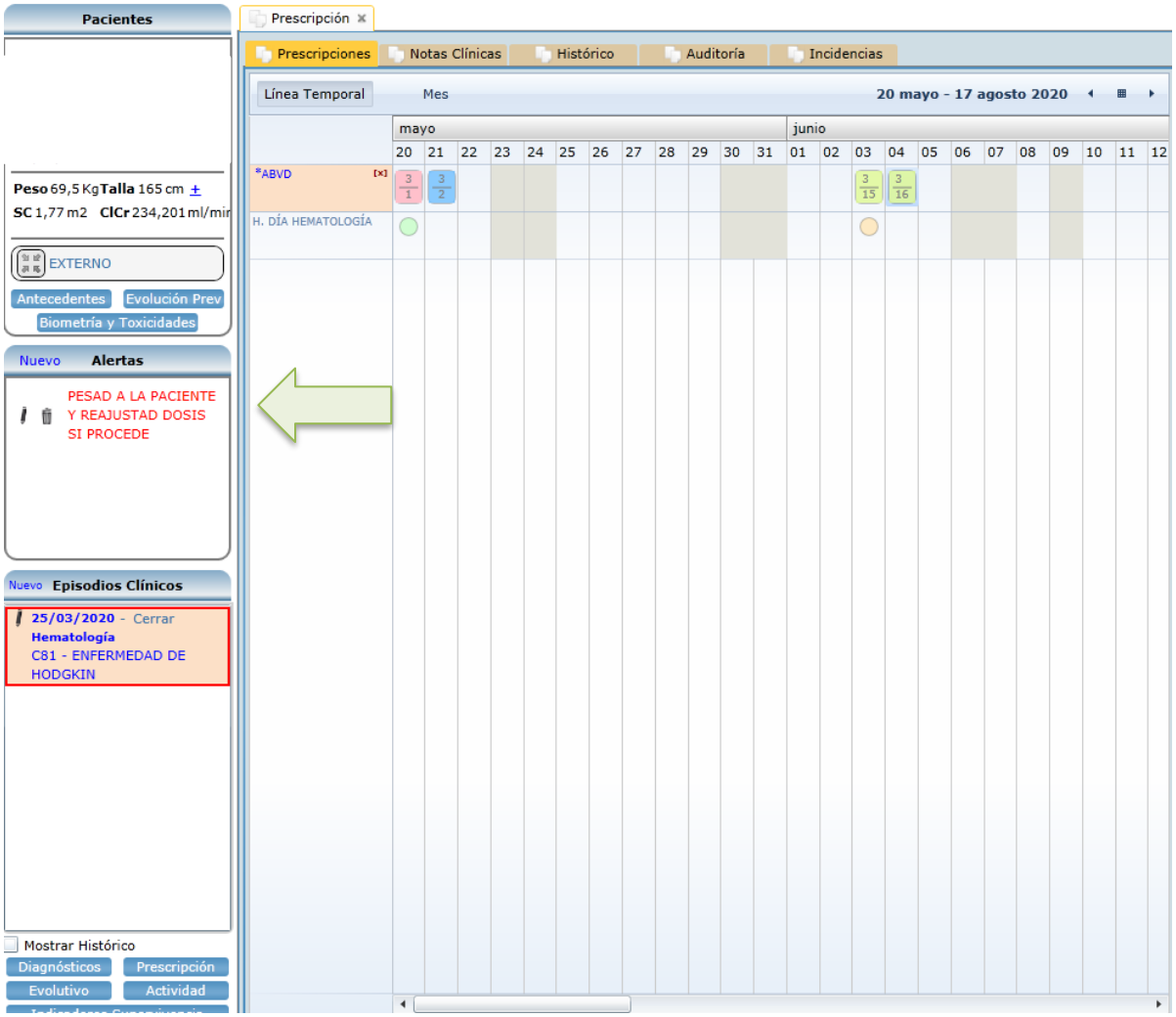
¿PESO IDEAL O **PESO REAL?**

- 3 x ABVD
- **PARTO:** 1 – 2 semana junio
- **Actualización peso:**

DÍA	PESO	SC
23 MARZO	64Kg	1,7
08 ABRIL	67,5Kg	1,74
20 MAYO	69,5Kg	1,77

4% DIFERENCIA



TRATAMIENTO

1. ¿Esquema? → ABVD

2. ¿Descriptor de peso adecuado?

3**. Pauta antiemética**

Esquema ABVD cada 28 días		
DIA 1	**DIA 15**	**PODER EMETÓGENO**
Fosaprepitant 150mg IV	Fosaprepitant 150mg IV	
Dexametasona 12 mg IV	Dexametasona 12 mg IV	
Ondansetron 8 mg IV	Ondansetron 8 mg IV	
Doxorubicina 25mg/m^2/ día	**Doxorubicina 25mg/m^2/ día**	**MODERADAMENTE EMETÓGENO**
Bleomicina 10000UI/ m^2/ día	**Bleomicina 10000UI/ m^2/ día**	**MÍNIMAMENTE EMETÓGENO**
Vinblastina 6mg m^2/ día	**Vinblastina 6mg m^2/ día**	**MÍNIMAMENTE EMETÓGENO**
Dacarbacina 375mg m^2/ día	**Dacarbacina 375mg m^2/ día**	**MUY EMETÓGENO**
DÍA 2	**DÍA 16**	
Dexametasona 8mg vo	Dexametasona 8mg vo	
DÍAS 3 y 4	**DÍAS 17 y 18**	
Dexametasona 8mg/12h vo	Dexametasona 8mg/12h vo	

Fármaco	FDA*	ADEC#	Observaciones
Aprepitant	B	B_1	Datos insuficientes. Usar sólo si muy justificado: si mal control con ondansetron ± dexametasona
Clorpromazina	C	D	No teratogenico. Podría usarse a dosis bajas. Su uso al final del embarazo puede asociarse a efectos extrapiramidales, distres respiratorio y letargo en el recién nacido.
Dexametasona	-	A	A partir de las diez semanas de gestación su uso en cursos cortos no es previsible que represente riesgo para el feto. Monitorizar Psanguínea y glucemia en la madre.
Fosaprepitant	B	B	Datos insuficientes. Usar sólo si muy justificado: si mal control con ondansetron ± dexametasona
Haloperidol	C	C	No recomendado su uso
Lorazepam	D	C	No recomendado su uso, especialmente primeras 10 semanas de embarazo.
Metoclopramida	B	A	No teratogénico. Estudios con dosis inferiores a las usadas en emesis por quimioterapia, durante el primer trimestre, no mostraron efectos adversos ni en la madre ni en el feto. Riesgo de efectos extrapiramidales en la madre y posiblemente en el neonato.
Ondansetron	**B**	**B**	**Fármaco de elección con los datos disponibles.**
Palonosetron	B	B_1	Menor experiencia que con ondansetrón
Tietilperazina **Olanzapina** **Netupitant/Palonosetron**	C C C	C C D	No recomendado su uso

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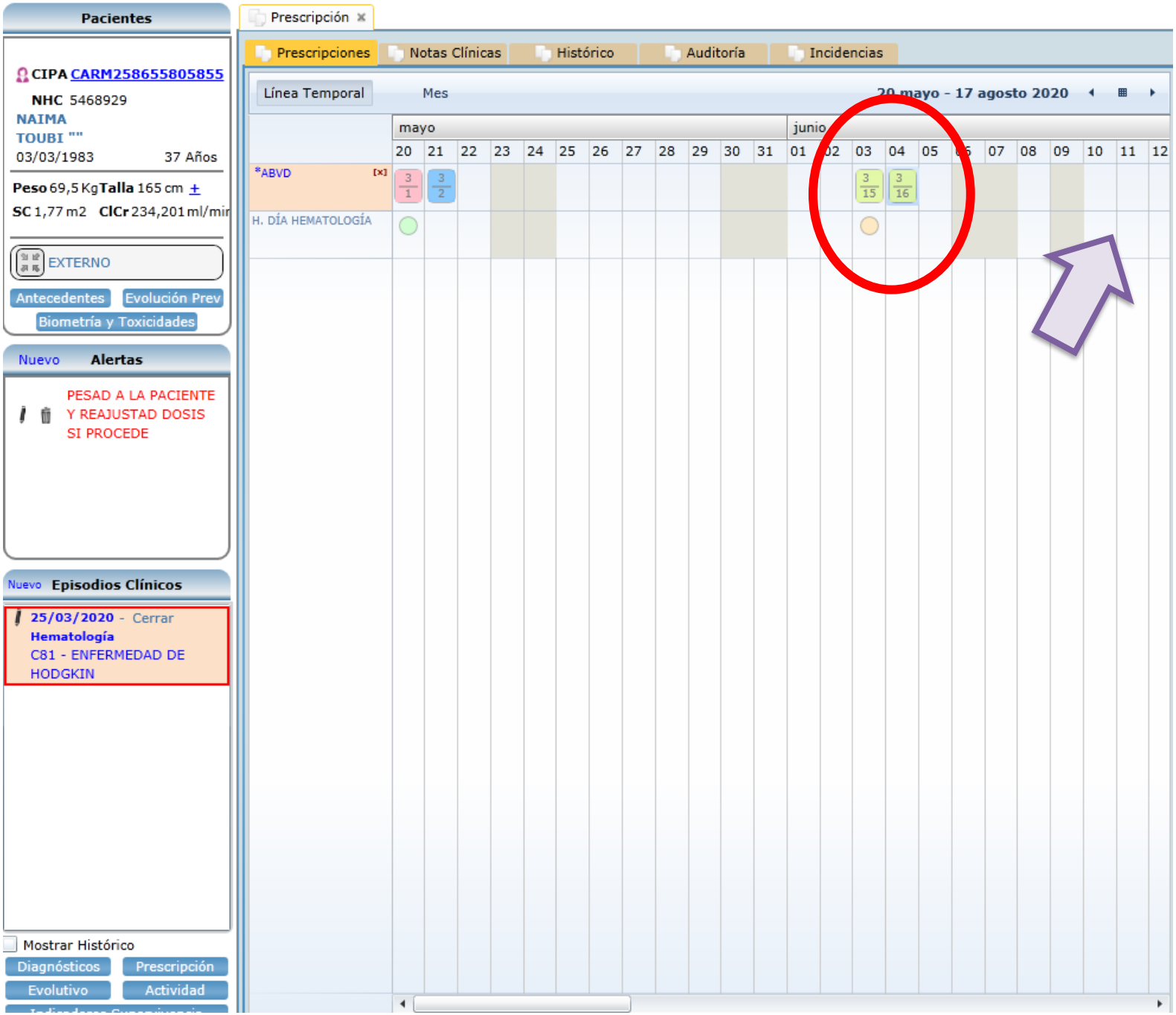
Pacientes
CIPA CARM258655805855
NHC 5468929
NAIMA
TOUBI ""
03/03/1983 37 Años
Peso 69,5 Kg Talla 165 cm
SC 1,77 m2 ClCr 234,201 ml/mi
EXTERNO
Antecedentes
Evolución Prev
Biometría y Toxicidades
Nuevo Alertas
PESAD A LA PACIENTE
Y REAJUSTAD DOSIS
SI PROCEDE
Nuevo Episodios Clínicos
25/03/2020 - Cerrar
Hematología
C81 - ENFERMEDAD DE
HODGKIN
Mostrar Histórico
Diagnósticos
Prescripción
Evolutivo
Actividad
Prescripción
Prescripciones
Notas Clínicas
Histórico
Auditoría
Incidencias
Línea Temporal
Mes
20 mayo - 17 agosto 2020
mayo
junio
20 21 22 23 24 25 26 27 28 29 30 31 01 02 03 04 05 06 07 08 09 10 11 12
*ABVD
H. DÍA HEMATOLOGÍA