

Cuidados del paciente en CAR-T

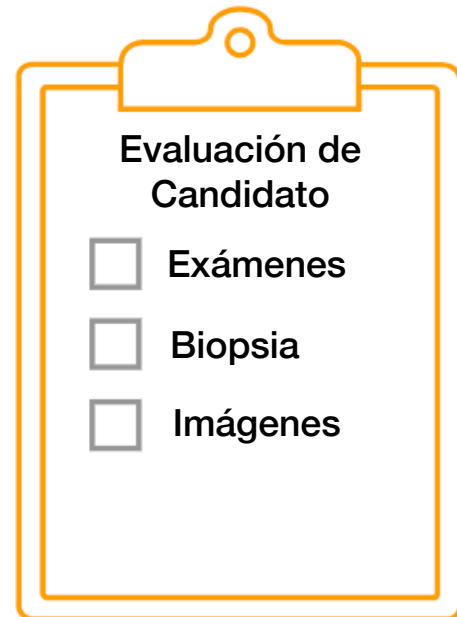
Nicolás Triantafilo C

Clínica Alemana de Stgo
@nico30f
ntriantafilo@alemana.cl
Abril 2025

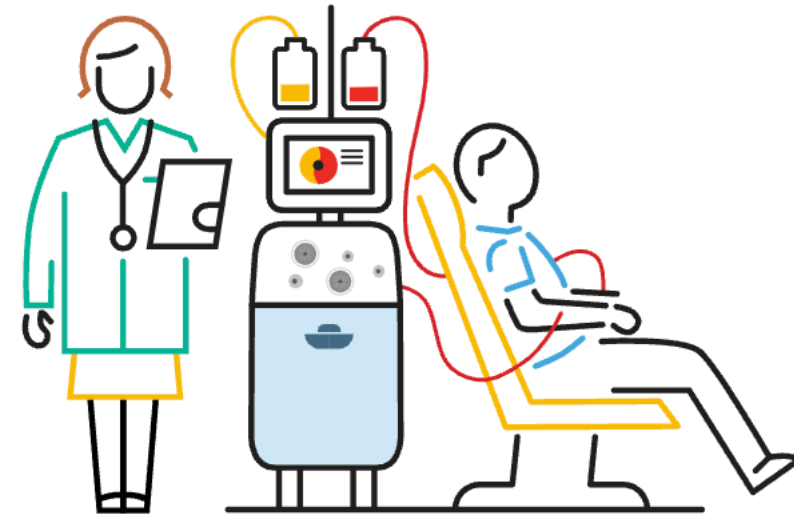
Conflictos de Interés

- Roche: Charlas, invitaciones a congresos
- MSD: Charlas
- Astrazeneca: Advisory boards
- Takeda: Advisory boards, Charlas

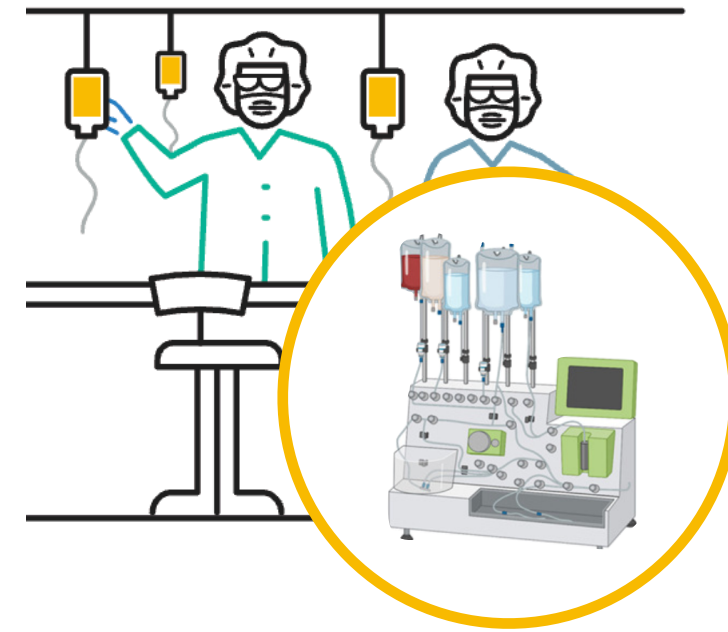
1. Evaluación



2. Aféresis



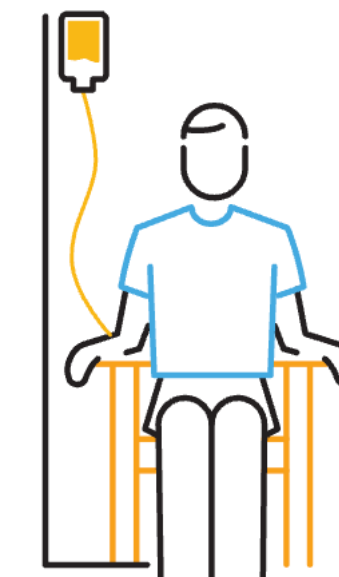
3. Manufactura



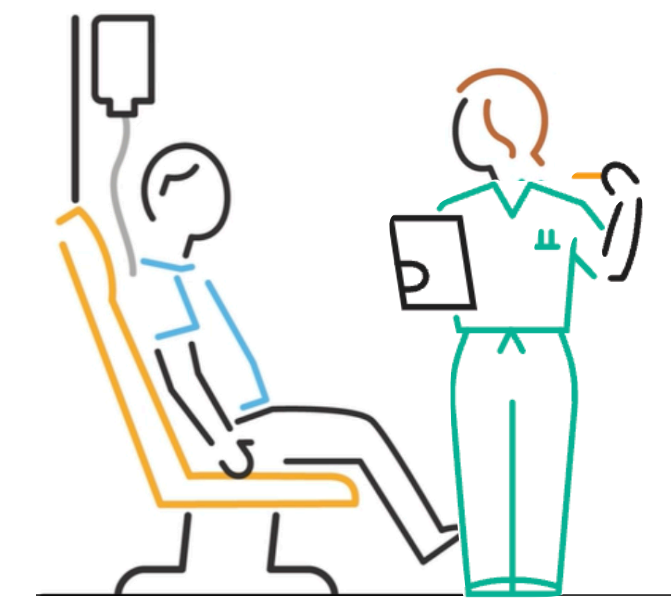
4. Linfodepleción



5. Infusión

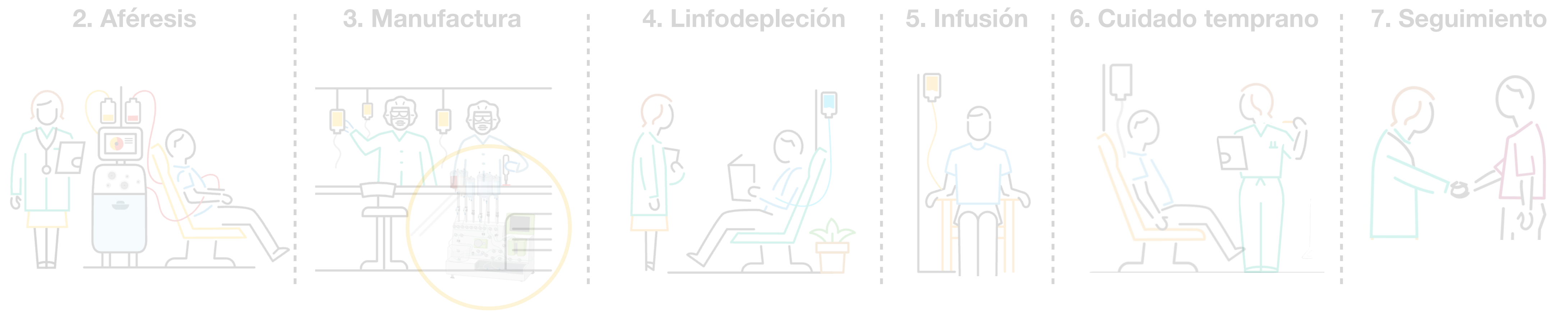


6. Cuidado temprano

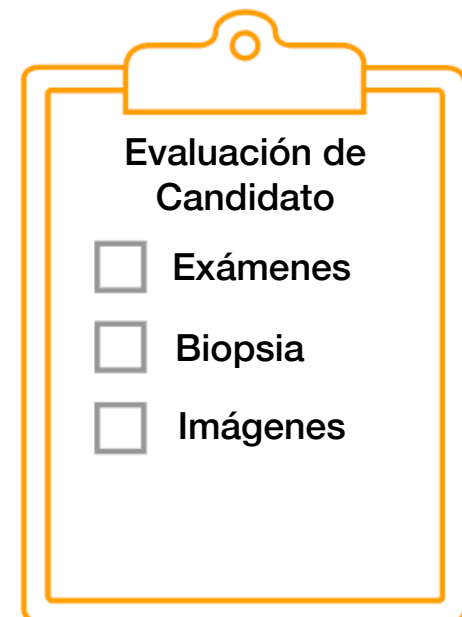


7. Seguimiento





1. Evaluación



Article | Published: 01 March 2025

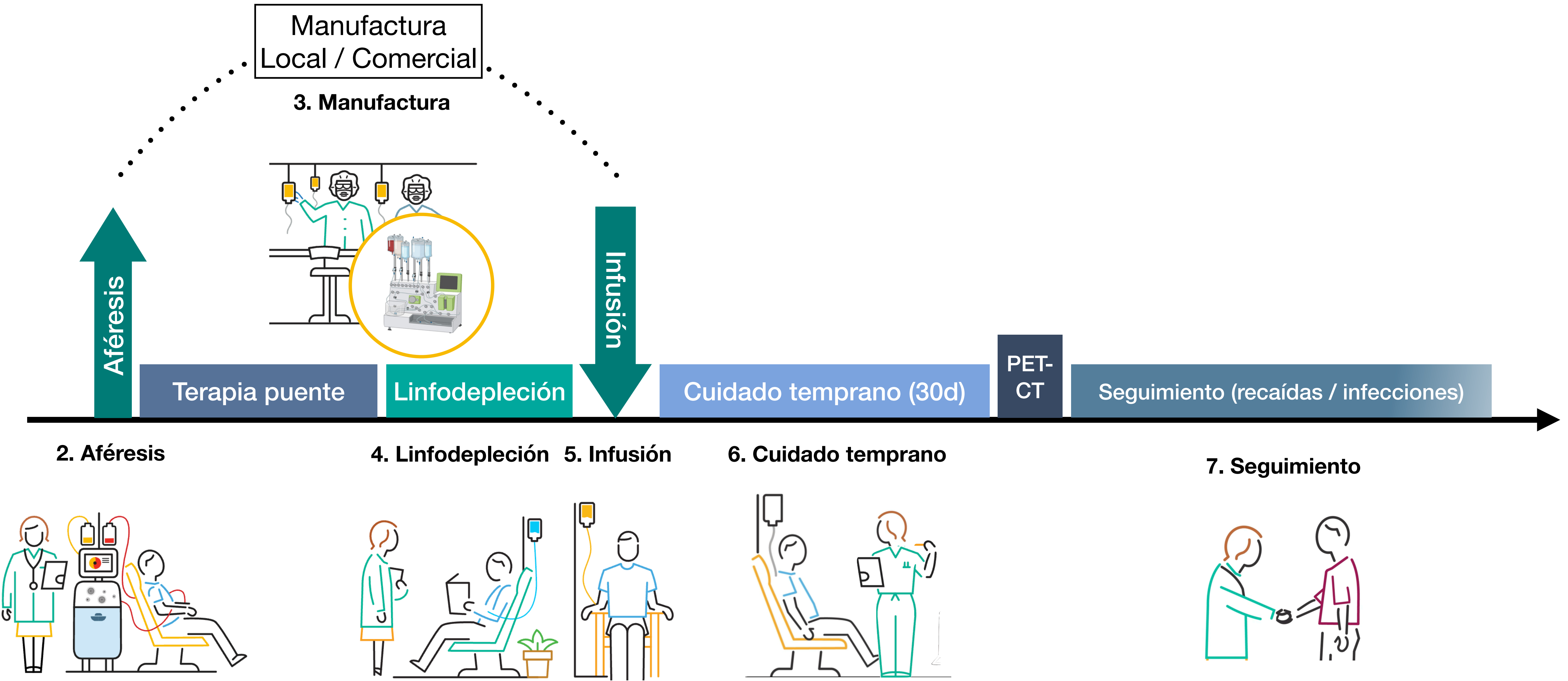
Chimeric antigen receptor T cell therapy in octogenarians with B cell lymphoma: a real-world US multicenter collaborative study

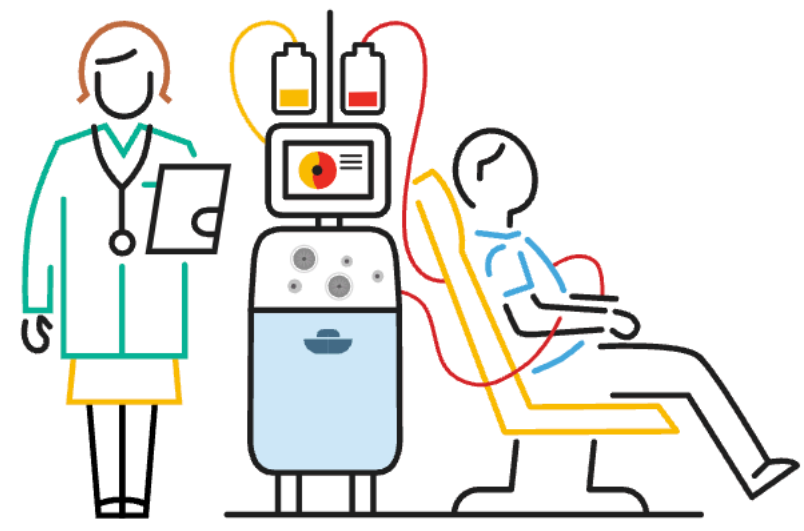
87 pacientes

NRM: 1 mes = 0, 3 meses = 1,4%, 6 meses = 4,6%, 12 meses = 11,6%

PFS 1a: 47,6%. SG 1a: 61,2%

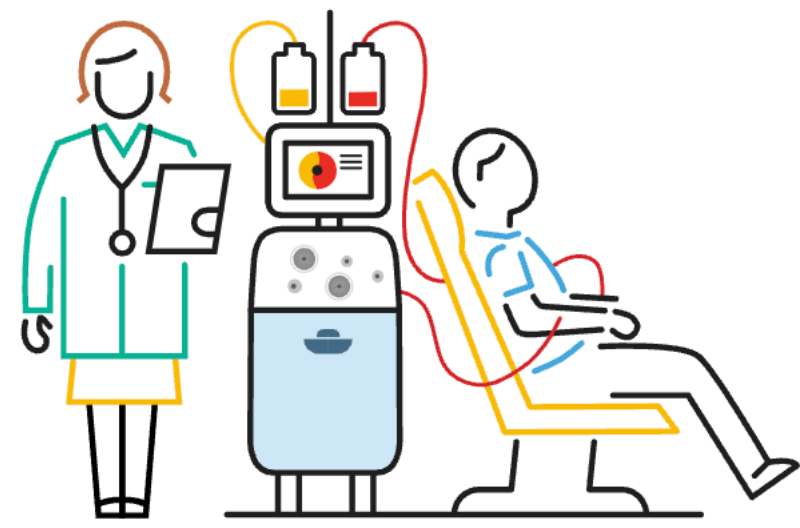
UCI: 11,5%





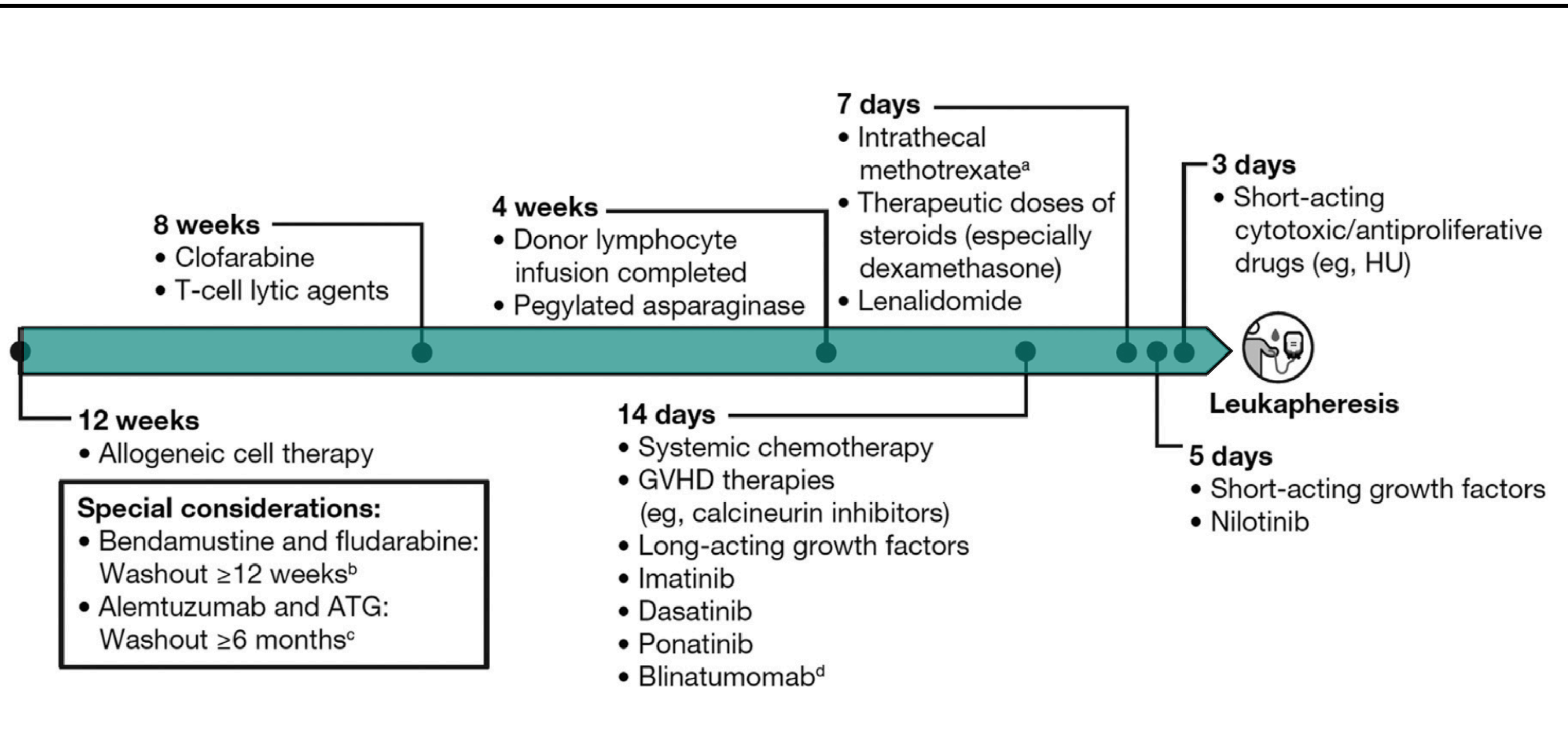
Aféresis

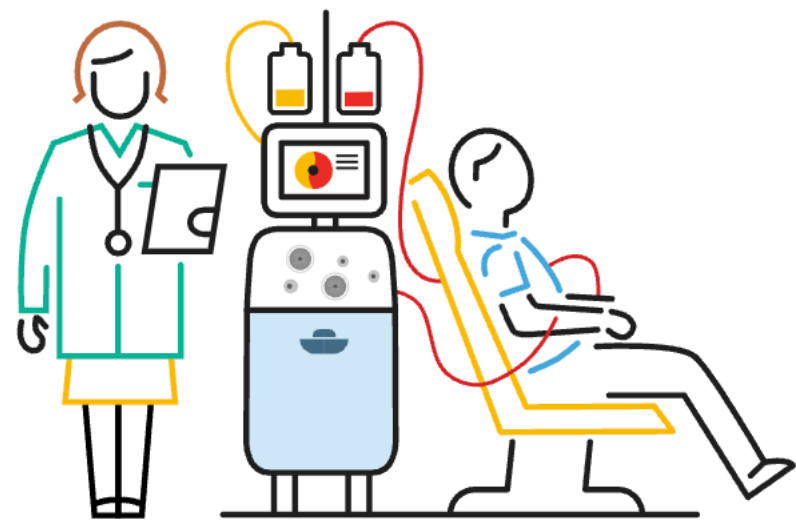
Leucoaféresis = Extracción de glóbulos blancos



Aféresis

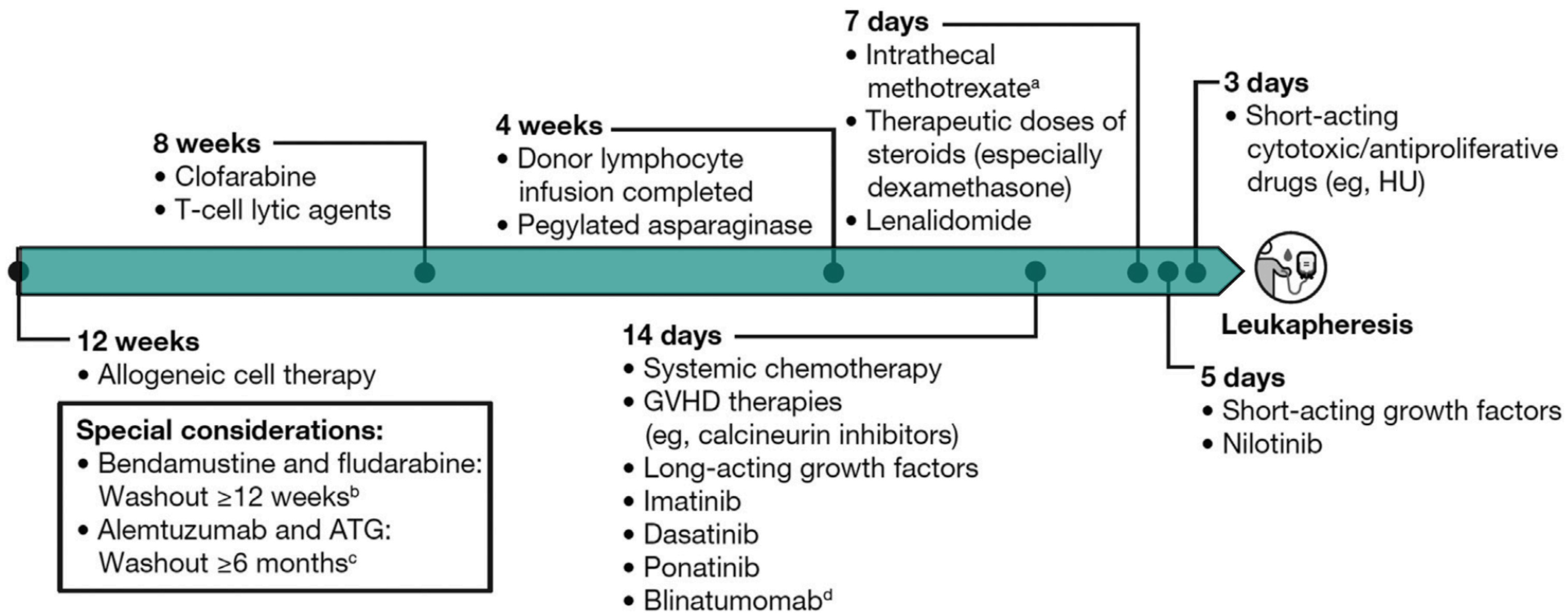
Leucoaféresis = Extracción de glóbulos blancos





Aféresis

Leucoaféresis = Extracción de glóbulos blancos



Special considerations:

- Bendamustine and fludarabine: Washout ≥ 12 weeks^b
- Alemtuzumab and ATG: Washout ≥ 6 months^c

General CAR T-cell leukapheresis guidance^b

ALC	Total blood volume processed
100 cells/ μ L	Consider 2-day collection
>100 cells/ μ L but <300 cells/ μ L	3.5–4 \times
>300 cells/ μ L but <500 cells/ μ L	3 \times
>500 cells/ μ L but <1000 cells/ μ L	2.5 \times
>1000 cells/ μ L	1.5 \times

CAR, chimeric antigen receptor; CD, cluster of differentiation; TNC, total nucleated cell.

^a Provided courtesy of Novartis Pharmaceuticals Corporation.

^b Based on the authors' clinical experience.



Linfodepleción

Hacer espacio para expansión del CAR-T

Disminuir Linfocitos T reguladores y células mieloides supresoras

Citotoxicidad directa y liberación de quimioquinas



Linfodepleción

Hacer espacio para expansión del CAR-T

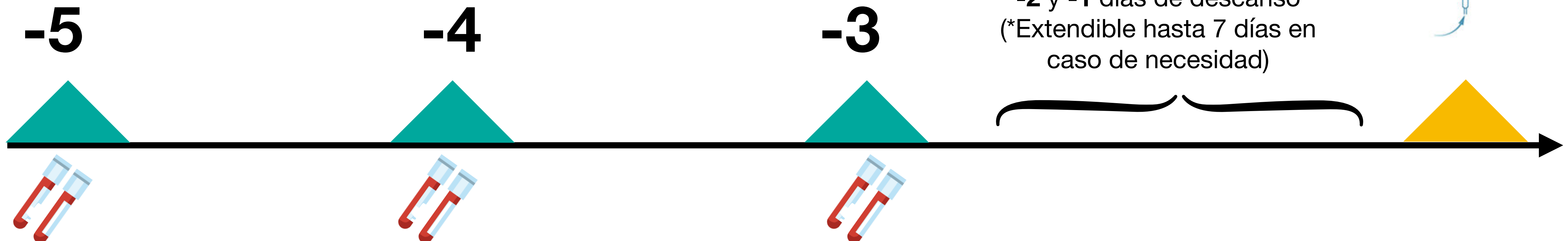
Disminuir Linfocitos T reguladores y células mieloides supresoras

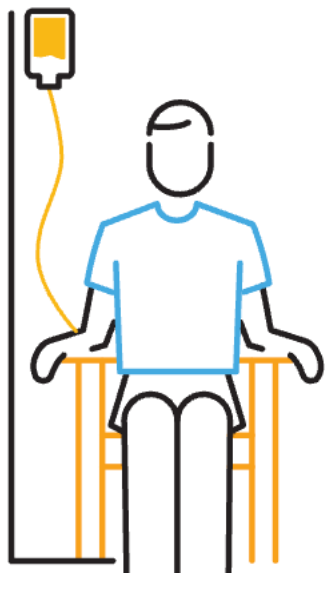
Citotoxicidad directa y liberación de quimioquinas

Esquemas variados: Ambulatorio

Ciclofosfamida 300 - 500 mg/m²/día x 3 días

Fludarabina 30 mg/m²/día x 3 días





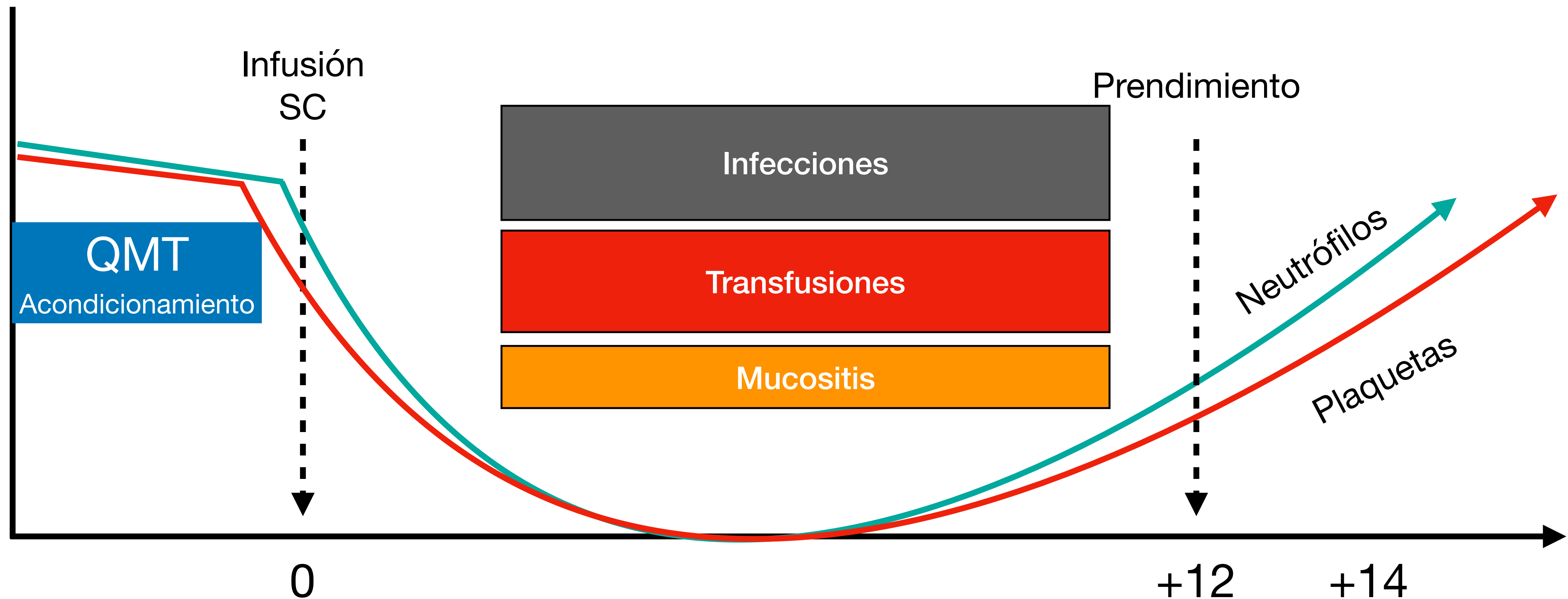
Infusión



Cuidados tempranos (0 - 30 d)

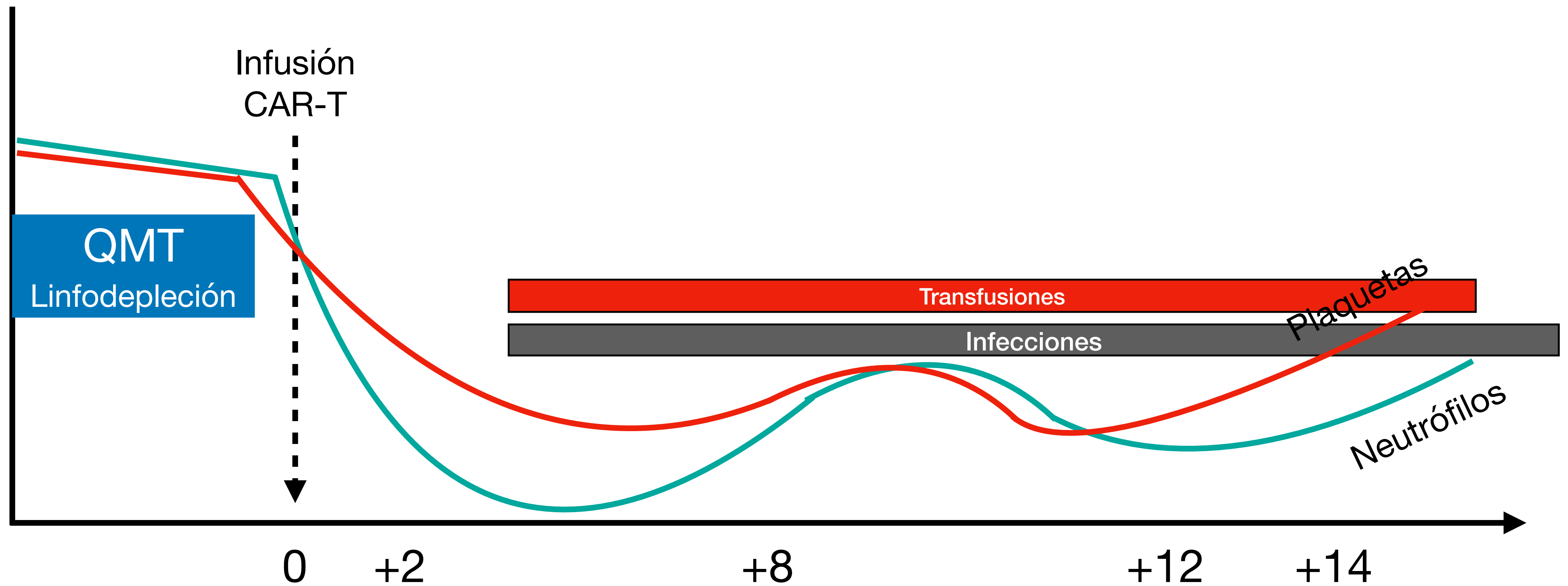
Cuidados tempranos (0 - 30 d)

Trasplante autólogo



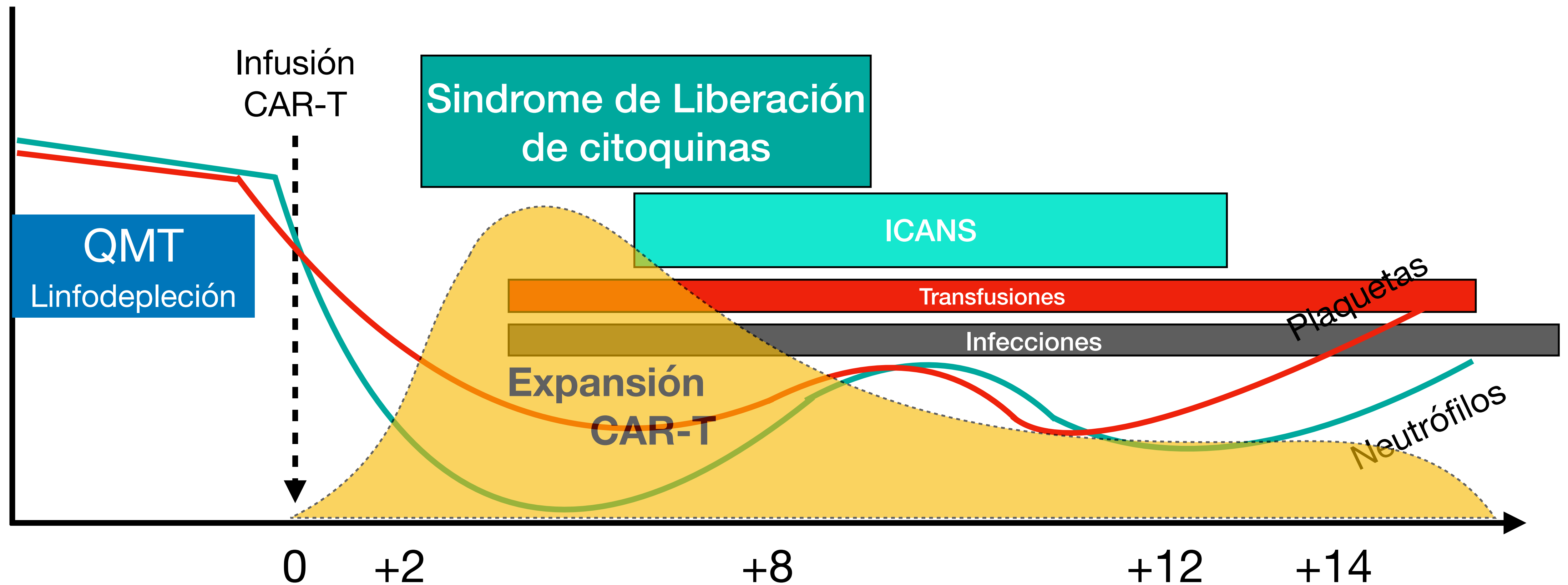
Cuidados tempranos (0 - 30 d)

CAR-T



Cuidados tempranos (0 - 30 d)

CAR-T



Cuidados tempranos (0 - 30 d)



Para pacientes ambulatorios: debe estar a **30-60 min del centro** que indicó CAR-T. Paciente debe contar con un **cuidador 24 / 7**

Evaluación **diaria** hasta día ~ +7, luego 3v x 1 sem y luego 1-2/sem hasta día +30

- Signos vitales: énfasis en fiebre
- Puntaje **ICE** diario
- Exámenes:
 - a. Diario: Hemograma / Ferritina / LDH / Hepático / fibrinogeno
 - b. Semanal: CMV (+/-)

Ingreso por **Urgencias** en caso de fiebre 38°C o alteraciones neurológicas

- Al ingreso control signos vitales según gravedad
- Puntaje ICE cada 8-12 hrs
- Laboratorio diario.

Cuidados tempranos (0 - 30 d)



Puntaje ICE
*(Pauta de evaluación
neuroológica)*

10 pts

1. Orientación **4 pts** (mes, año, ciudad, hospital)
2. Nominación **3 pts** (lapiz, reloj, botón)
3. Órdenes **1 pts**
4. Escritura **1 pts**
5. Atención **1 pts** (secuencia 100-7)

Cuidados tempranos (0 - 30 d)



BASELINE ASSESSMENT	
Can the patient state their name correctly?	Check one <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Can the patient state or do the following correctly: <ul style="list-style-type: none">• The current month• Name of the hospital• Count backwards from 100 by 10• Close eyes and stick out tongue / Show two fingers	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Ask the patient to verbally identify three common objects in the room. <ul style="list-style-type: none">• Is the patient's speech clear?• Has patient correctly identified the three objects?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

Writing Test - Nursing Assessment Tool **BASELINE ASSESSMENT**

To be completed by patient:

What is today's date: 05.13.24

What is the time: 11:50 am

WRITE "sweet as apple pie" on the line below

sweet as apple pie

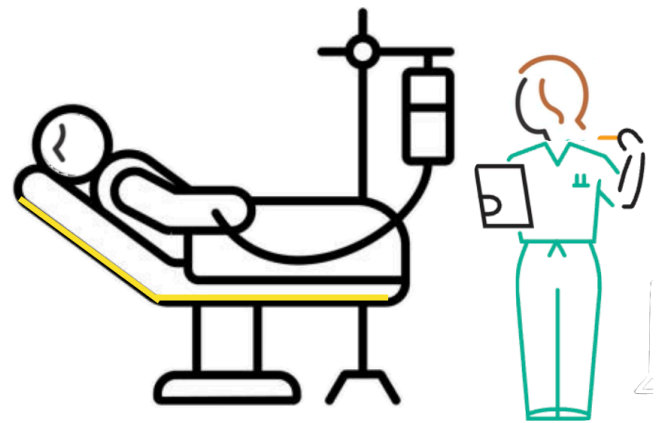
To be completed by RN:

RN Signature: R. Rodriguez, RN

Date / Time: 5/13/2024, 11:50

RN to make a copy of this form. Copy to stay in the patient room.
 RN to place original in "To be Scanned" tray.

* Adapted from ICE tool



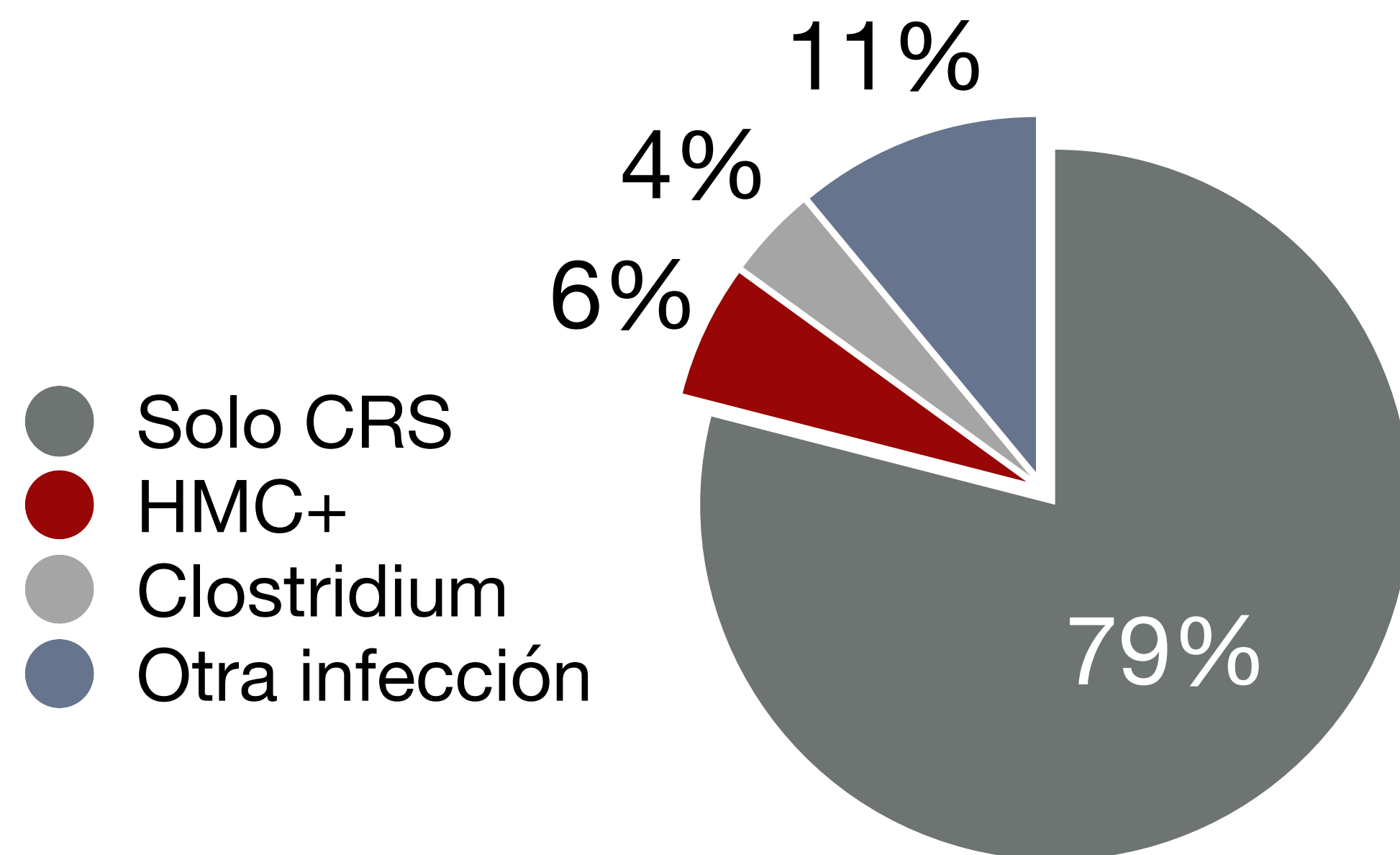
Cuidados tempranos (0 - 30 d)

Fiebre & CRS

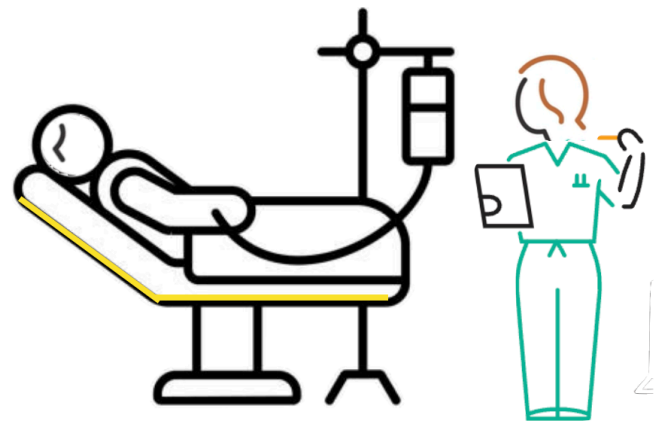
Ingreso

Hemocultivo + ATB empírico según caso y neutropenia

CRS será la causa más frecuente de fiebre

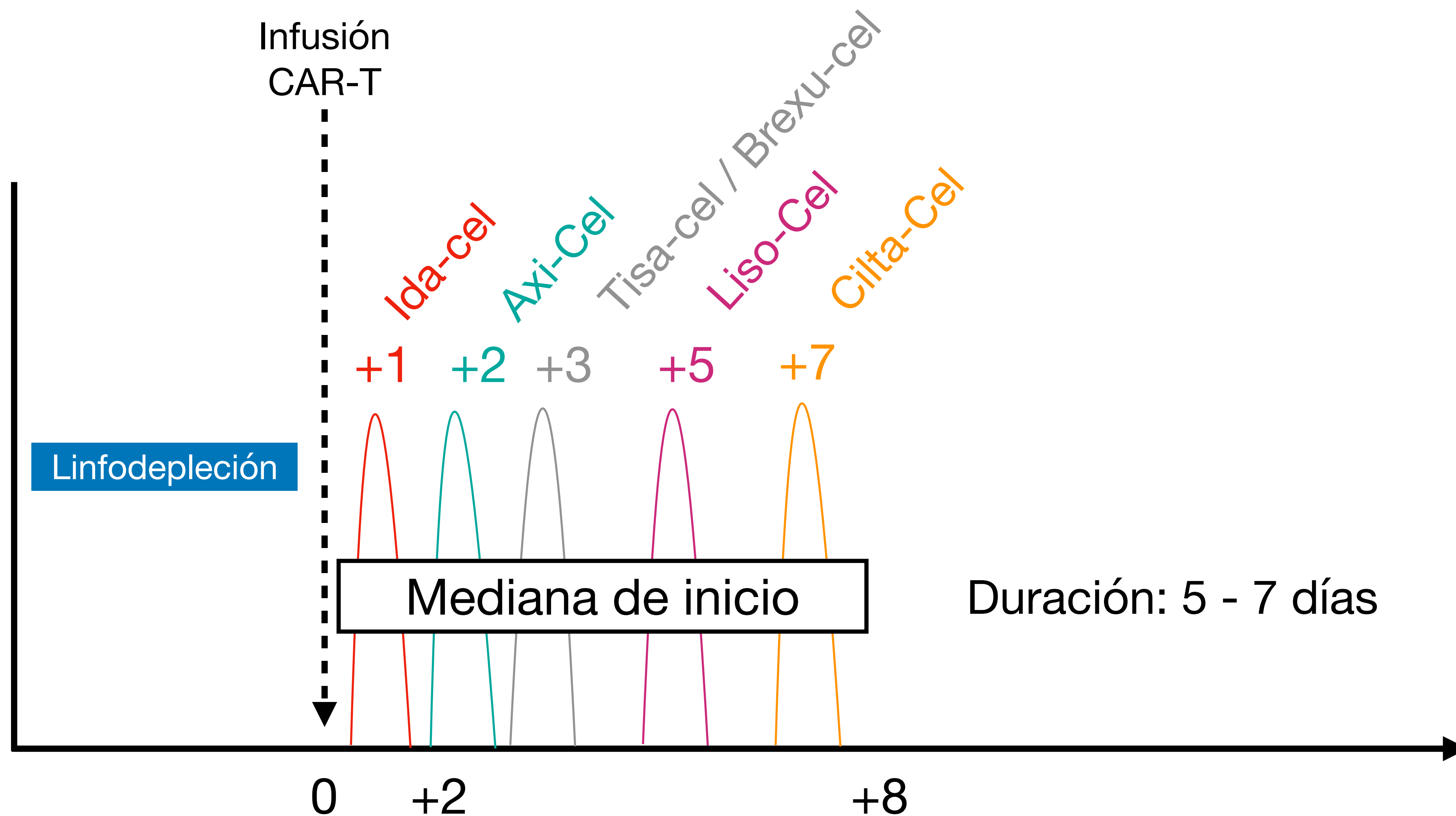


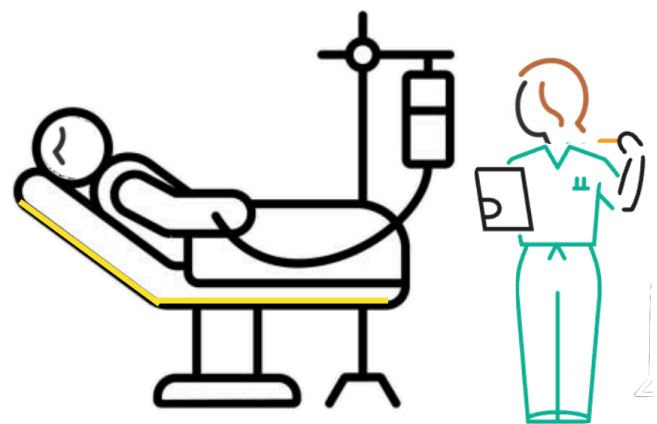
Desde la infusión a d+30



Cuidados tempranos (0 - 30 d)

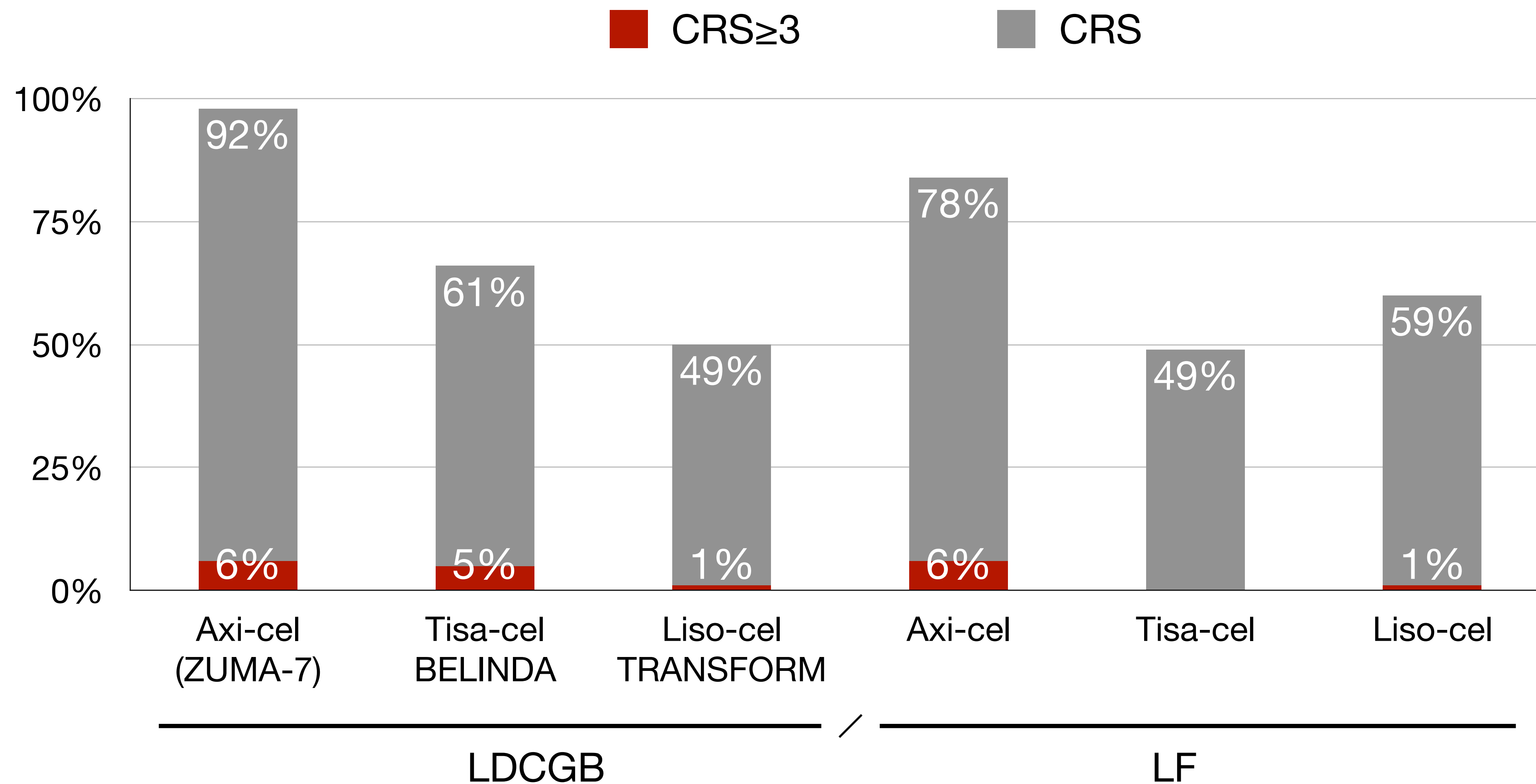
CRS

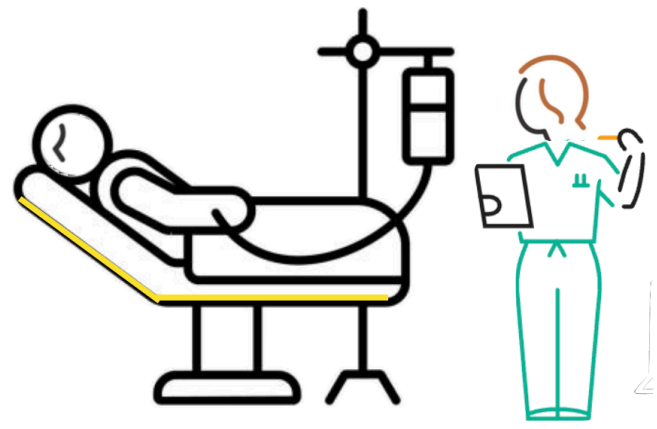




Cuidados tempranos (0 - 30 d)

CRS









Cuidados tempranos (0 - 30 d)

CRS




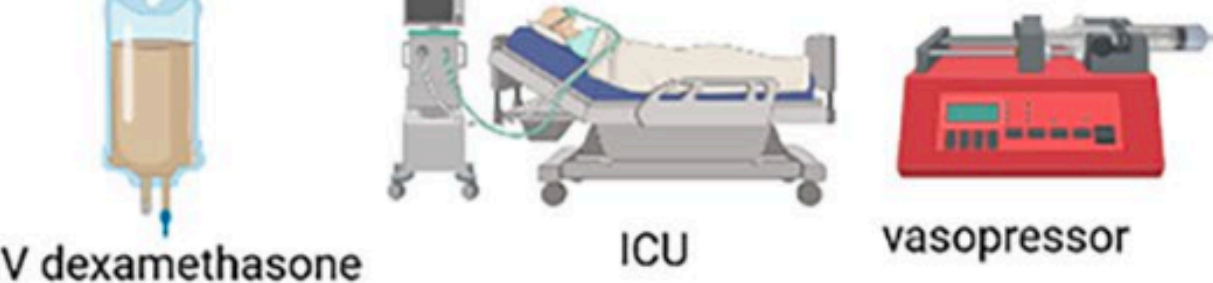
1

 temperature > 38°C +  antipyretics IV cristalloids

2

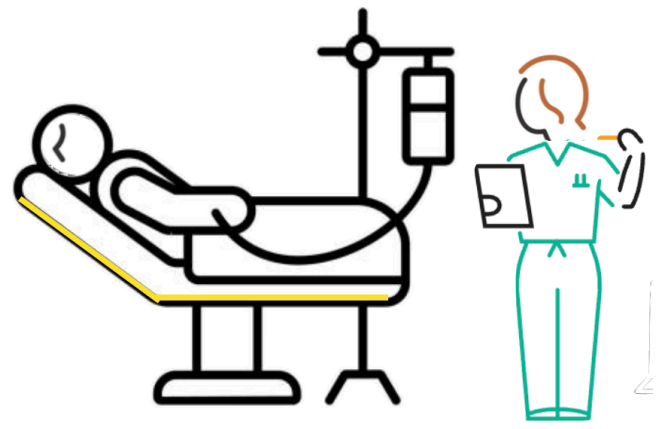
 temperature > 38°C low blood pressure +  +/-  oxygen ≤ 6L/min +  Tocilizumab

3

 temperature > 38°C low blood pressure 1 vasopressor +  +/-  oxygen > 6L/min +  IV dexamethasone ICU vasopressor

4


 temperature > 38°C low blood pressure >1 vasopressor +  +/-  oxygen > 6L/min intubation or PAP +  IV methylprednisolone > than 1 vasopressor



Cuidados tempranos (0 - 30 d)

CRS

1


temperature > 38°C

+


antipyretics IV cristalloids

2


temperature > 38°C low blood pressure

 +/- 
oxygen ≤ 6L/min

+



Tocilizumab

3


temperature > 38°C low blood pressure
1 vasopressor

 +/- 
oxygen > 6L/min

+


IV dexamethasone ICU vasopressor

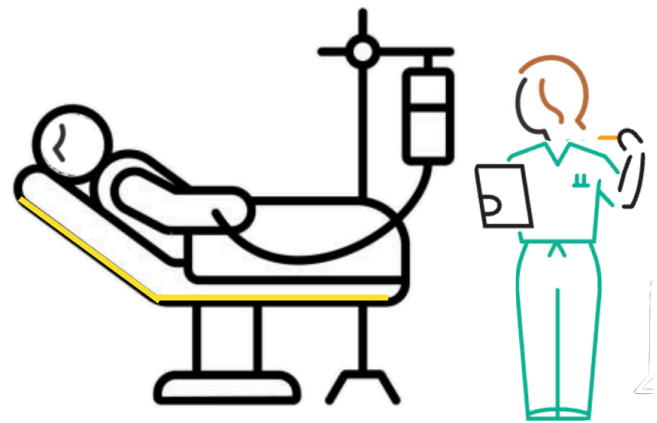
4


temperature > 38°C low blood pressure
>1 vasopressor

 +/- 
oxygen > 6L/min
intubation or PAP

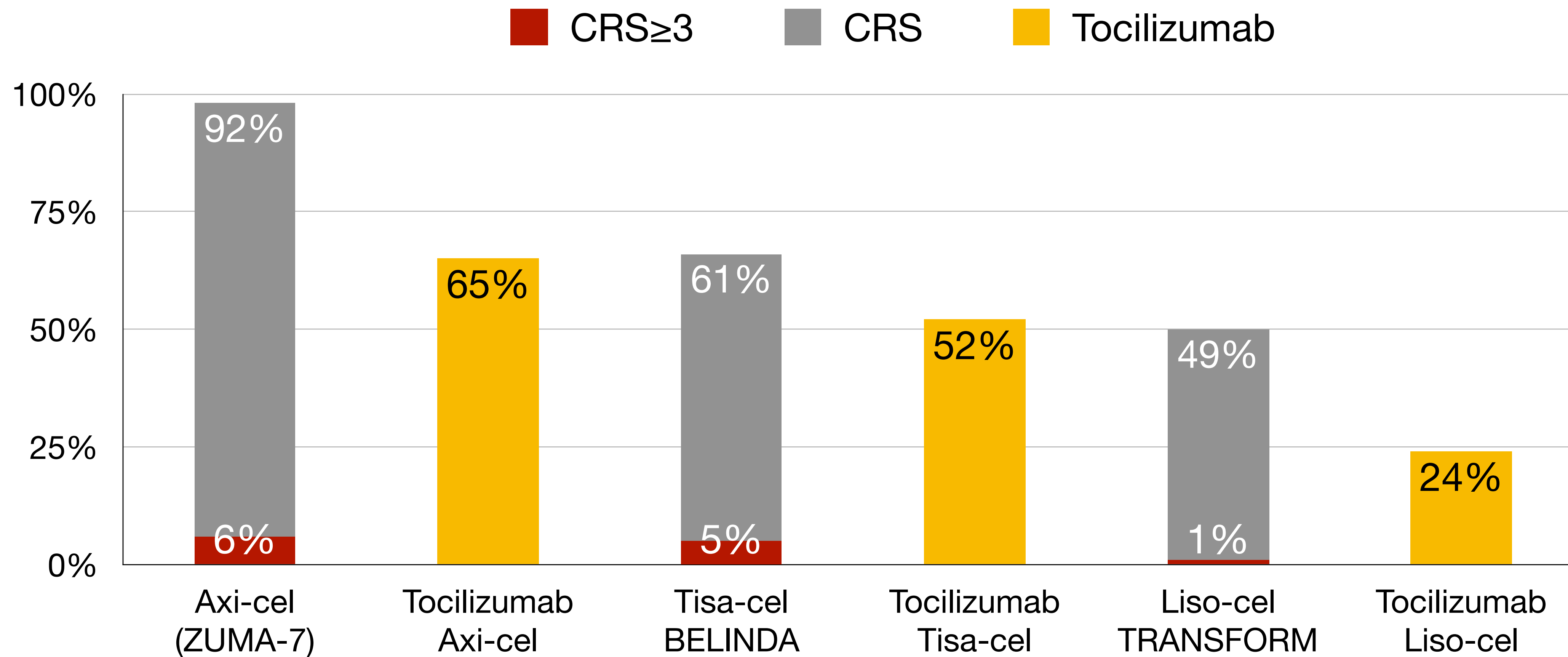
+

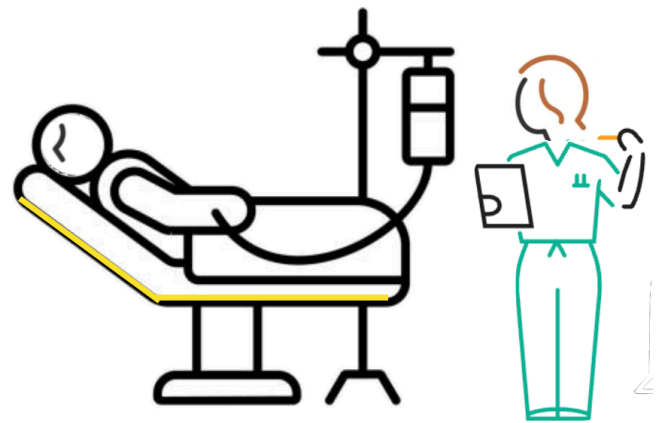

IV methylprednisolone > than 1 vasopressor



Cuidados tempranos (0 - 30 d)

CRS

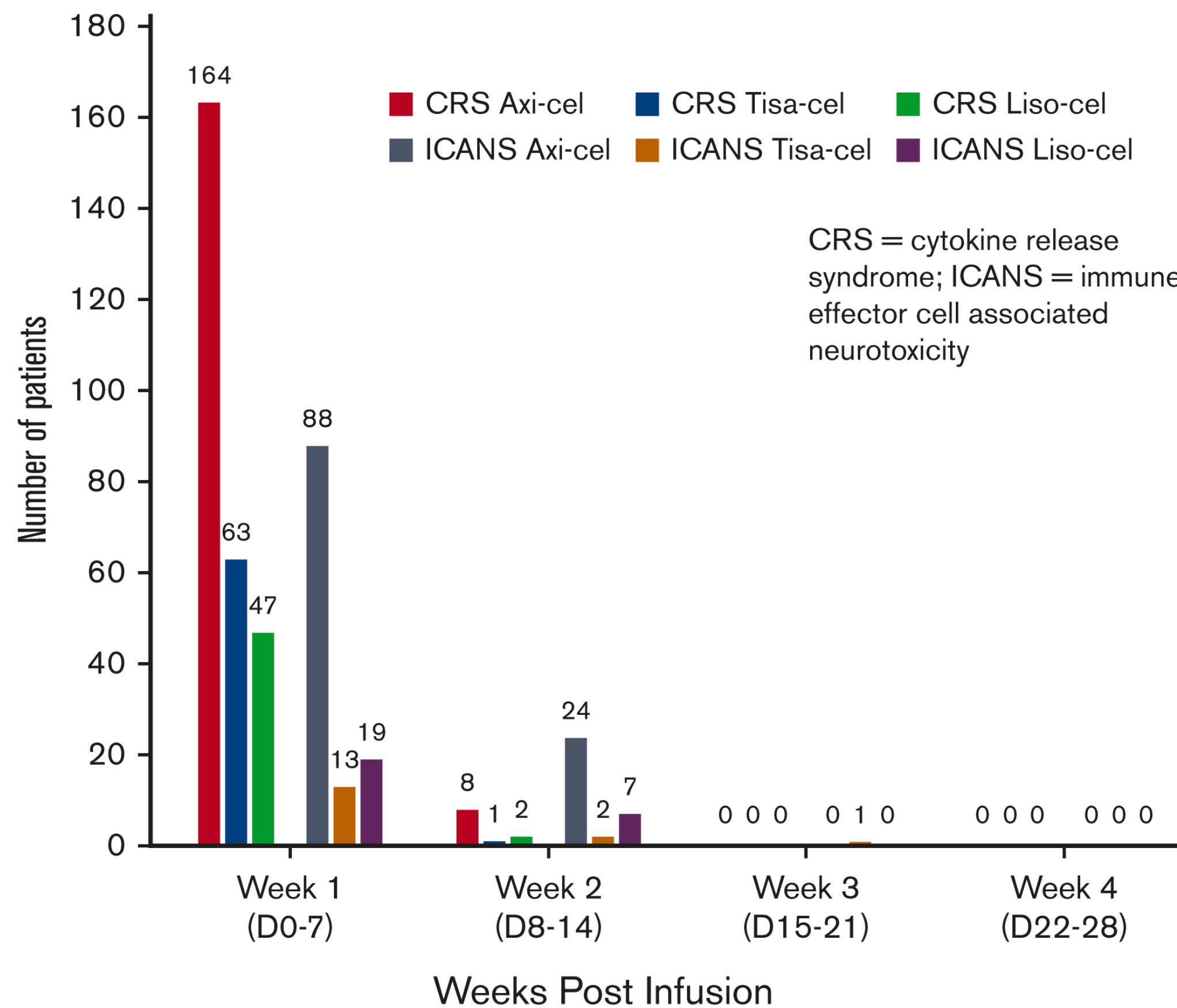




Cuidados tempranos (0 - 30 d)

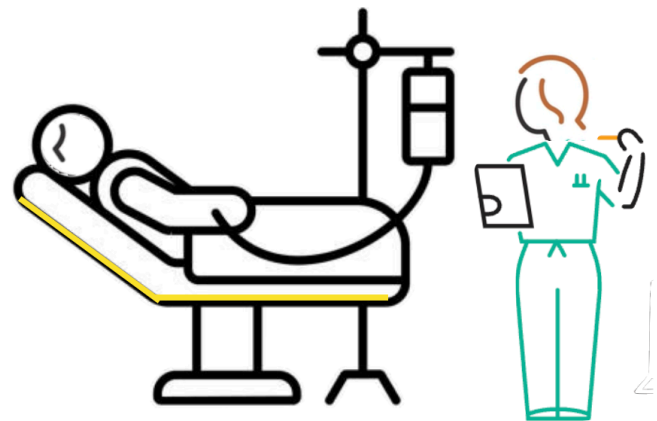
CRS

Incidence of CRS and ICANS in the first 28 days post CD19 CAR T infusion



Weeks Post Infusion

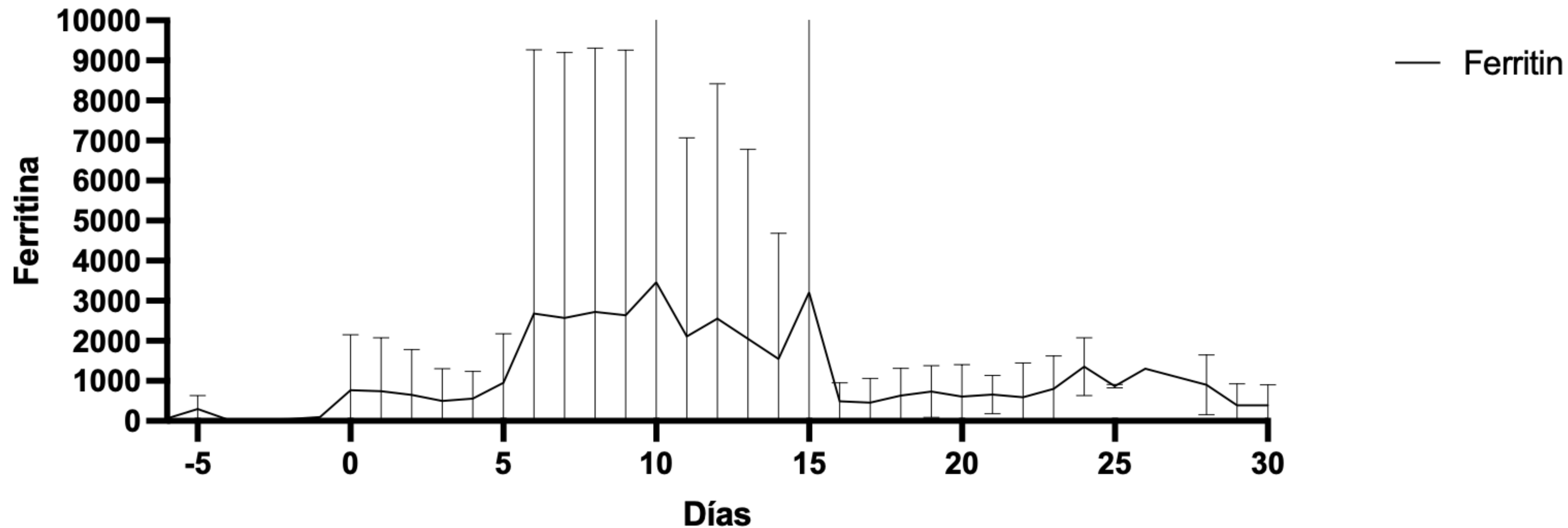
Incidence	Day 0-7	Day 8-14	Day 15-21	Day 22-28
CRS	274	11	0	0
ICANS	120	33	1	0
Death (all cause)	1	1	5	9
Numbers at risk	Day 0-7	Day 8-14	Day 15-21	Day 22-28
CRS	475	201	189	184
ICANS	475	354	320	314

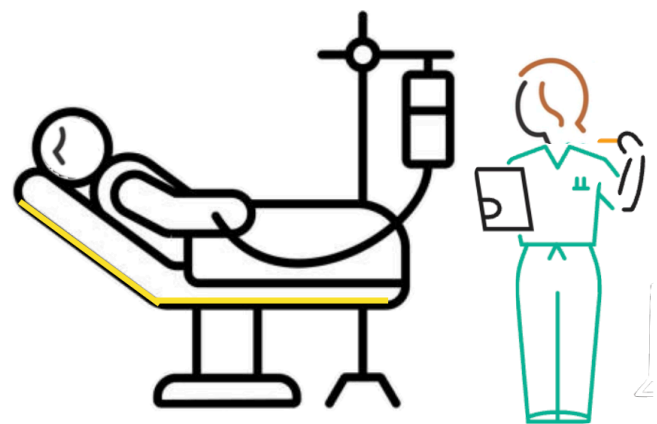


Cuidados tempranos (0 - 30 d)

CRS

Evolución de ferritina y ALC

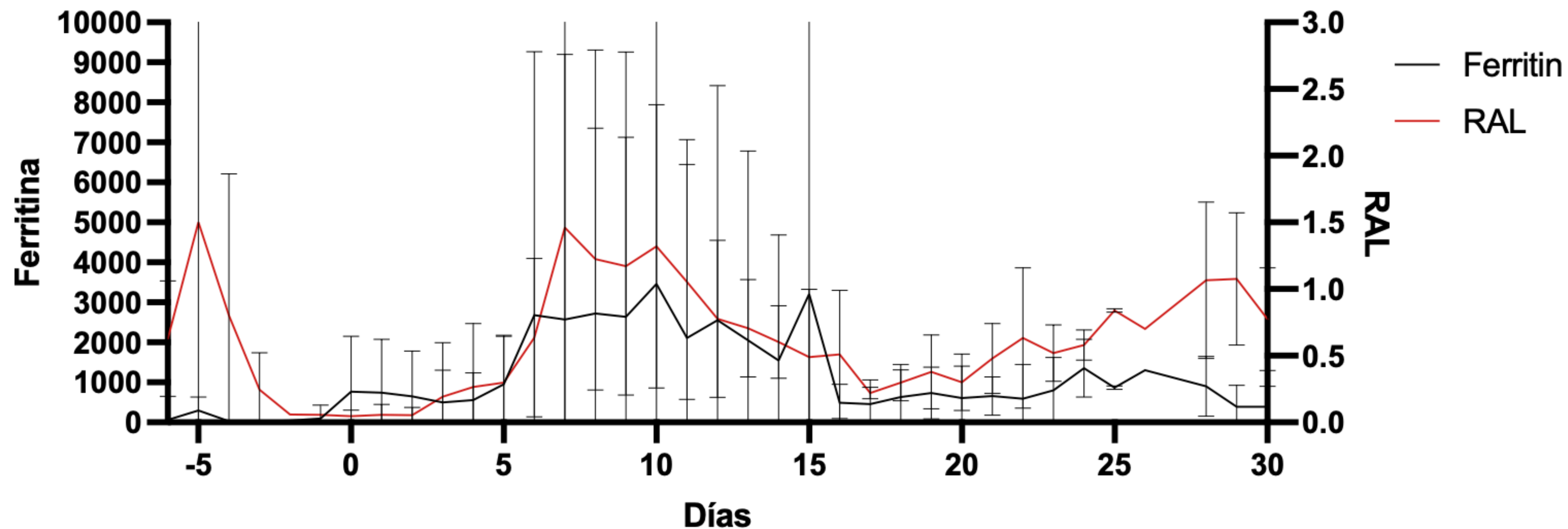


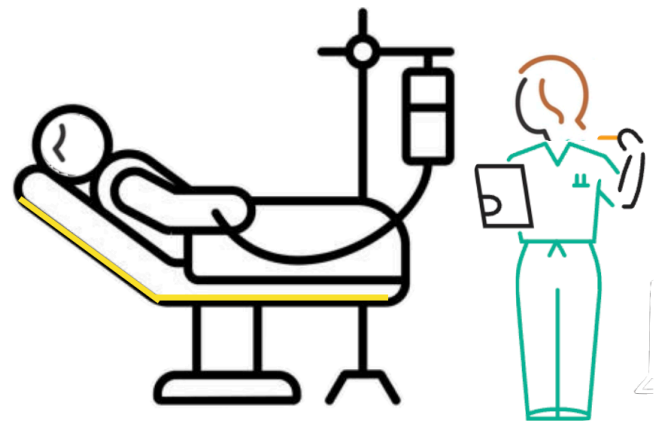


Cuidados tempranos (0 - 30 d)

CRS

Evolución de ferritina y RAL

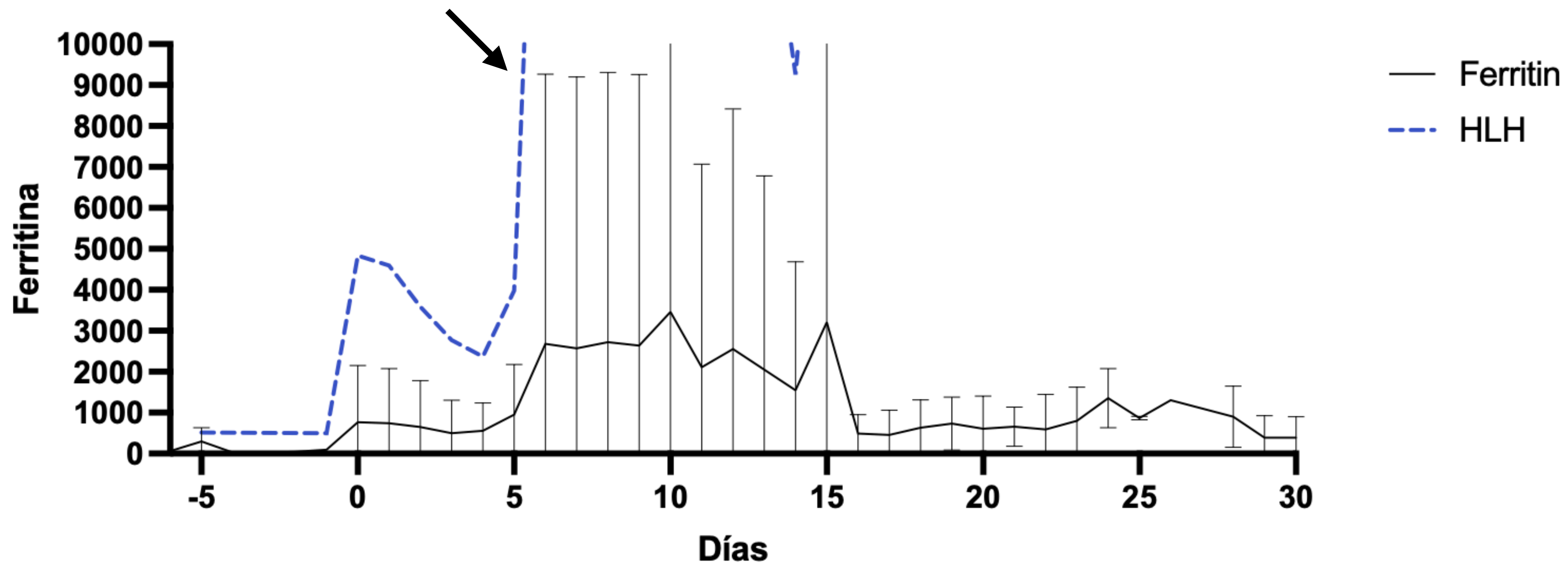


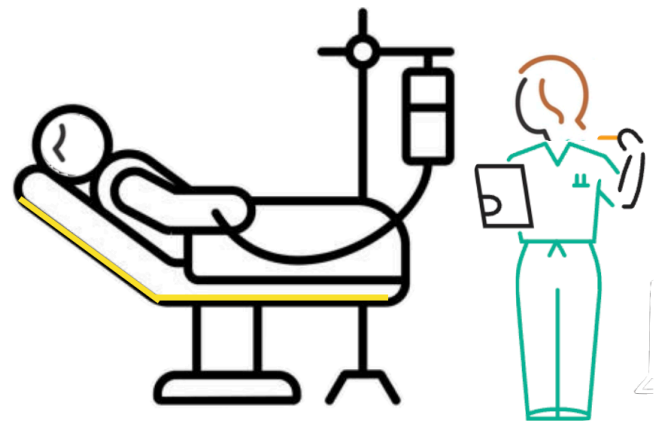


Cuidados tempranos (0 - 30 d)

CRS

Evolución de ferritina y ALC

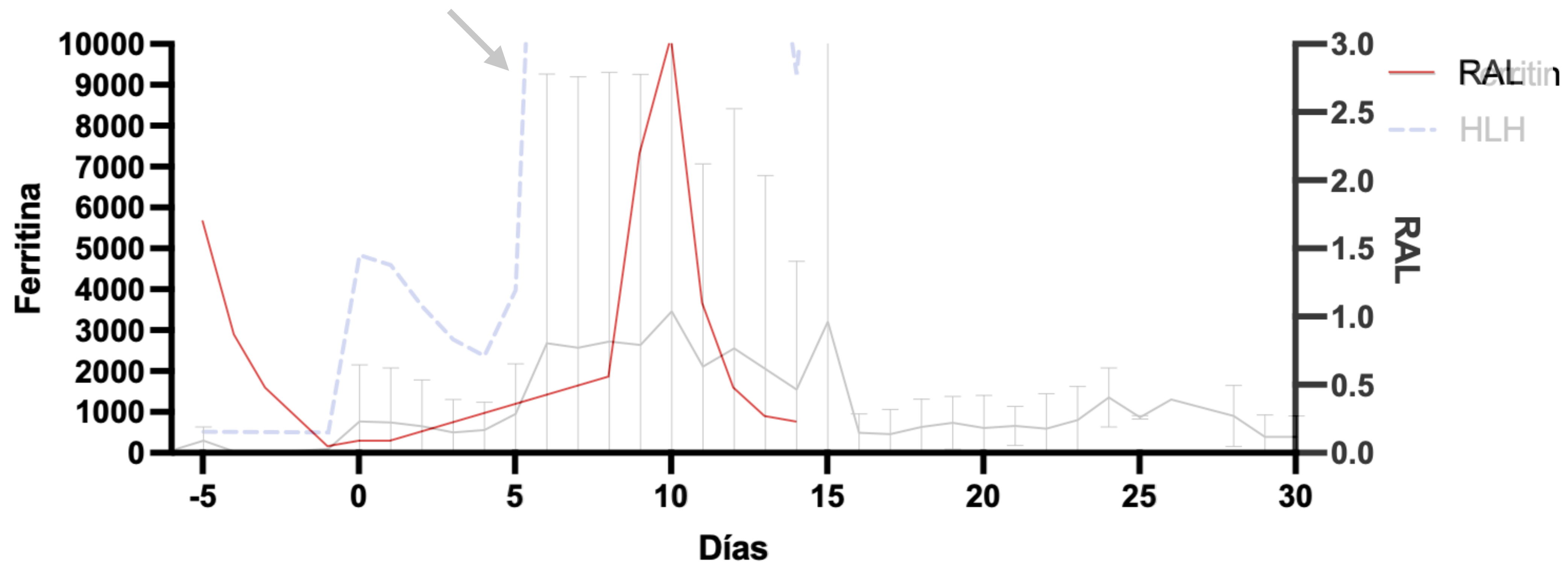


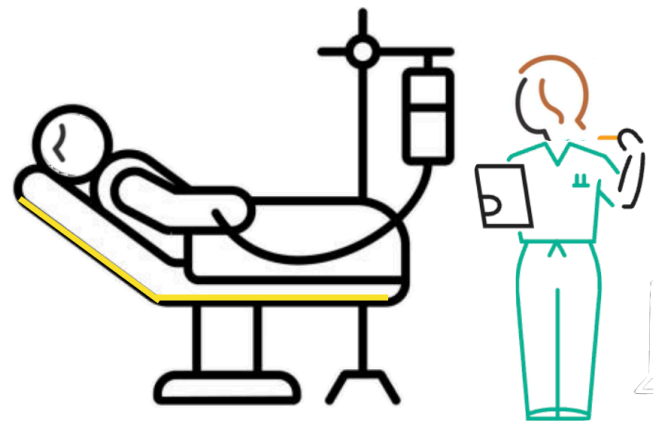


Cuidados tempranos (0 - 30 d)

CRS

Evolución de ferritina y ALC



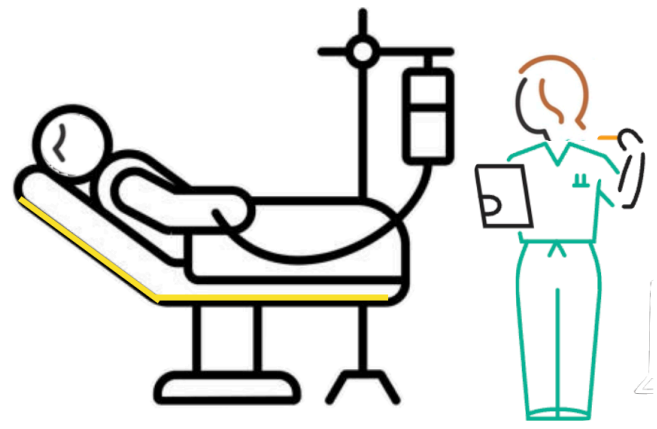


Cuidados tempranos (0 - 30 d)

HLH-CAR

CARTOX
criteria [16]
(2017)

- Ferritin levels peak at $>10,000$ ng/mL during the CRS phase
 - Any two of the following:
 - Grade 3 or greater liver toxicity
 - Grade 3 or greater kidney toxicity
 - Grade 3 or greater lung toxicity
 - Hemophagocytosis in the bone marrow or other organs
-



Cuidados tempranos (0 - 30 d)

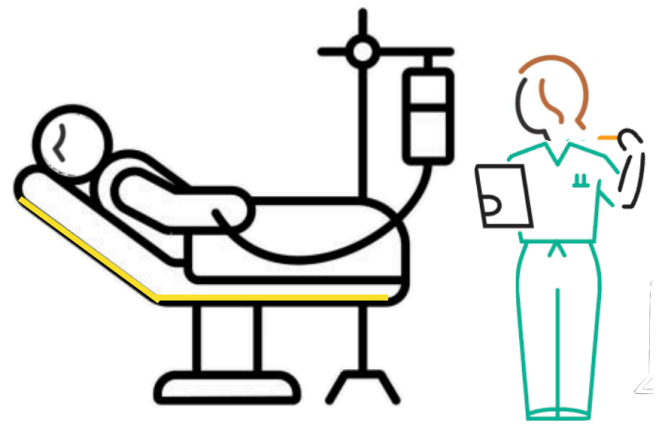
HLH-CAR

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 - Grade 3 or greater kidney toxicity
 - Grade 3 or greater lung toxicity
 - Hemophagocytosis in the bone marrow or other organs

Product	Trial	Indication	Incidence of HLH/MAS
Tisagenlecleucel (brand name: Kymriah)	ELIANA [18]	B-ALL (peds/AYA)	6% (5/79)
	JULIET [19]	Large B-cell lymphoma	2% (2/115)
	ELARA [20]	Follicular lymphoma	1% * (1/97)
Axicabtagene ciloleucel (brand name: Yescarta)	ZUMA-7 [21]	Large B-cell lymphoma	0% (0/168)
	ZUMA-1 [22]	Large B-cell lymphoma	1% (1/108)
	ZUMA-5 [23]	Indolent non-Hodgkin lymphoma (124 follicular lymphoma, 22 marginal zone)	0% (0/146)
Brexucabtagene autoleucel (brand name: Tecartus)	ZUMA-2 [24]	Mantle cell lymphoma	0% (0/82)
	ZUMA-3 [25]	B-ALL	4% (3/78)
lisocabtagene maraleucel (brand name: Breyanzi)	Transform [26]	Large B-cell lymphoma	1.1% (1/89)
	PILOT [27]	Large B-cell lymphoma	0% (0/61)
	TRANSCEND [28]	Large B-cell lymphoma	0% (0/268)

1-3%

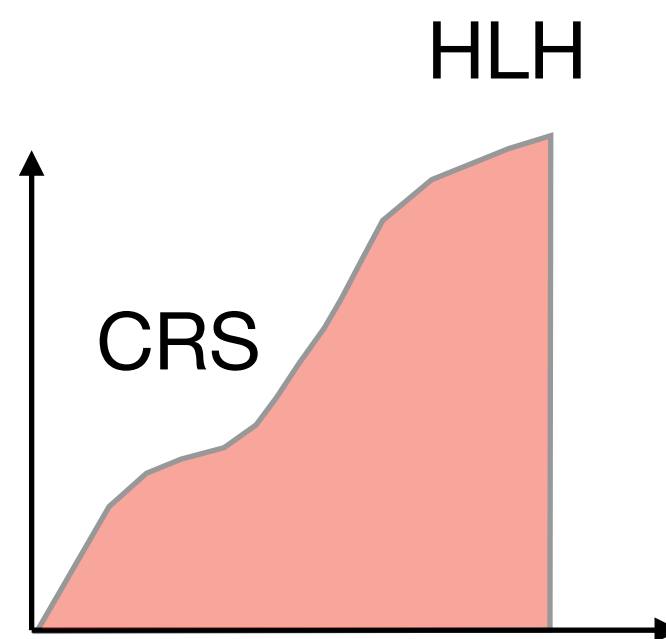


Cuidados tempranos (0 - 30 d)

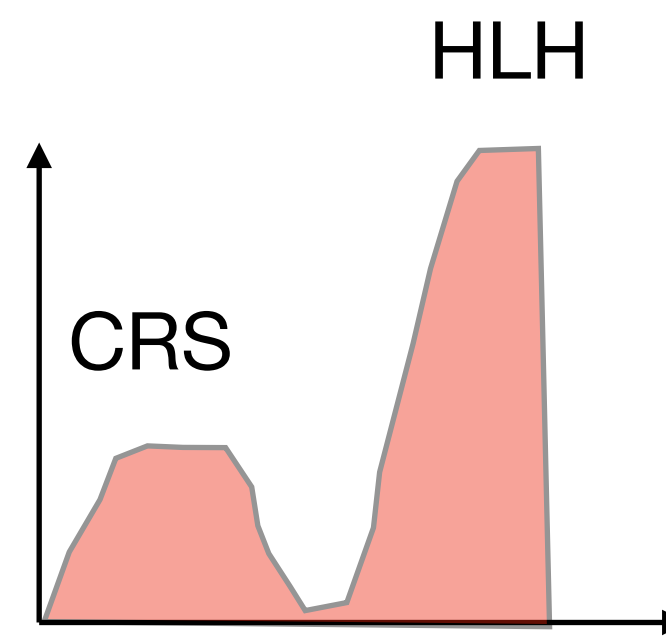
HLH-CAR

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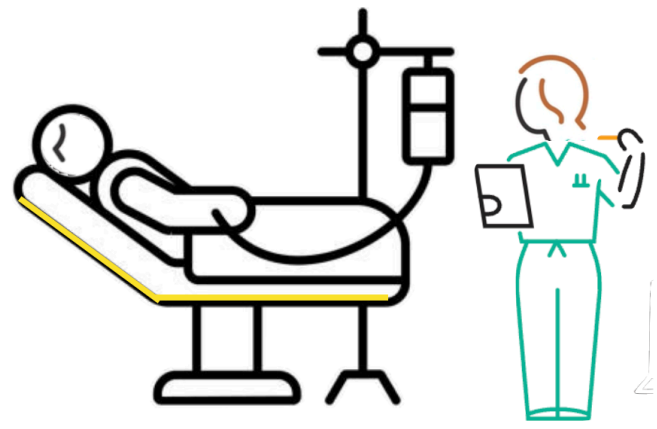


62%



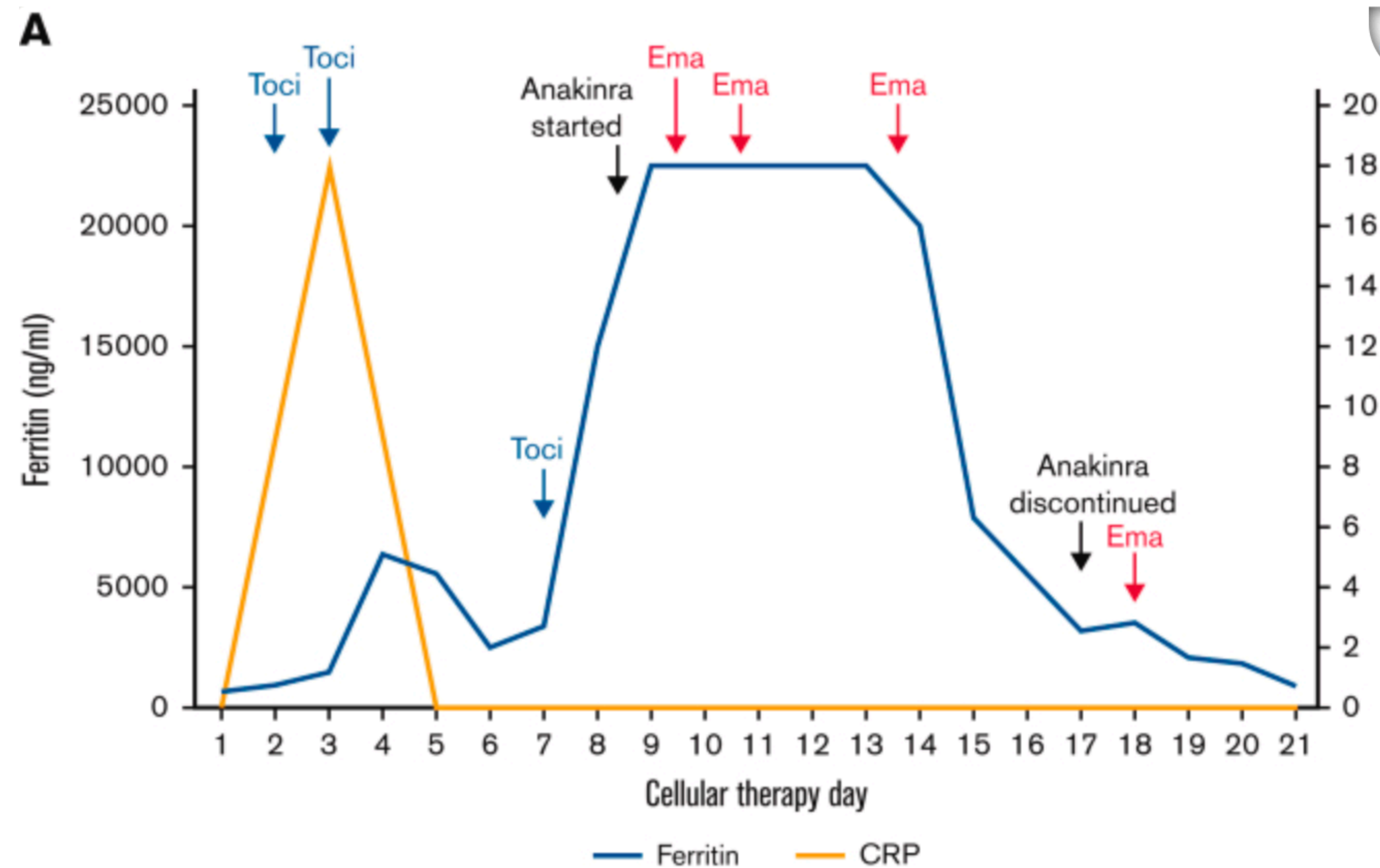
38%

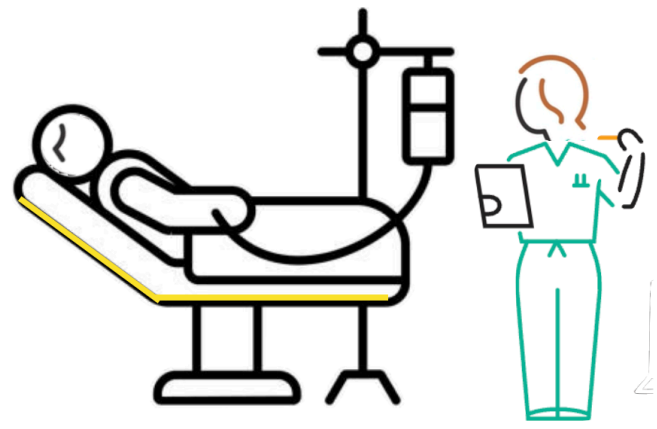
Mediana de inicio = 8 días
Mediana de duración = 8 días



Cuidados tempranos (0 - 30 d)

HLH-CAR





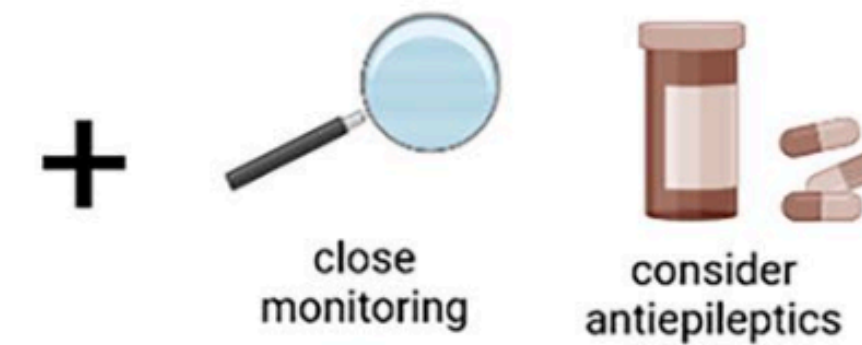
Cuidados tempranos (0 - 30 d)

ICANS

1



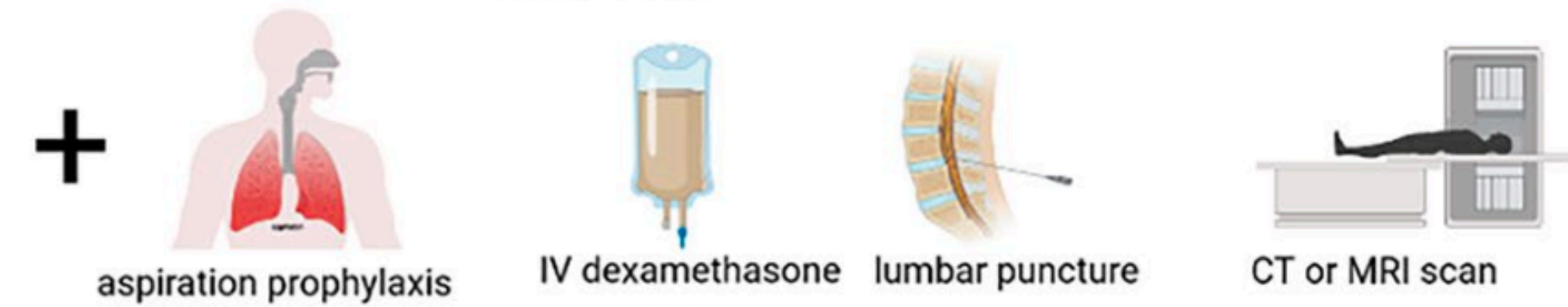
ICE Score 7-9



2



ICE Score 3-6



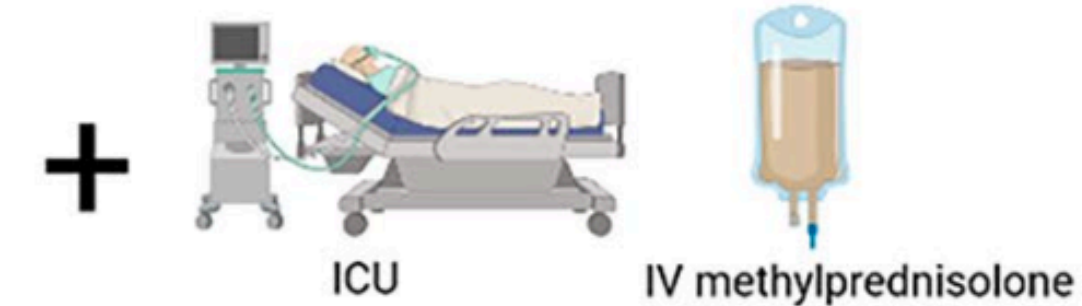
3



ICE Score 0-2



fokal cerebral edema



4



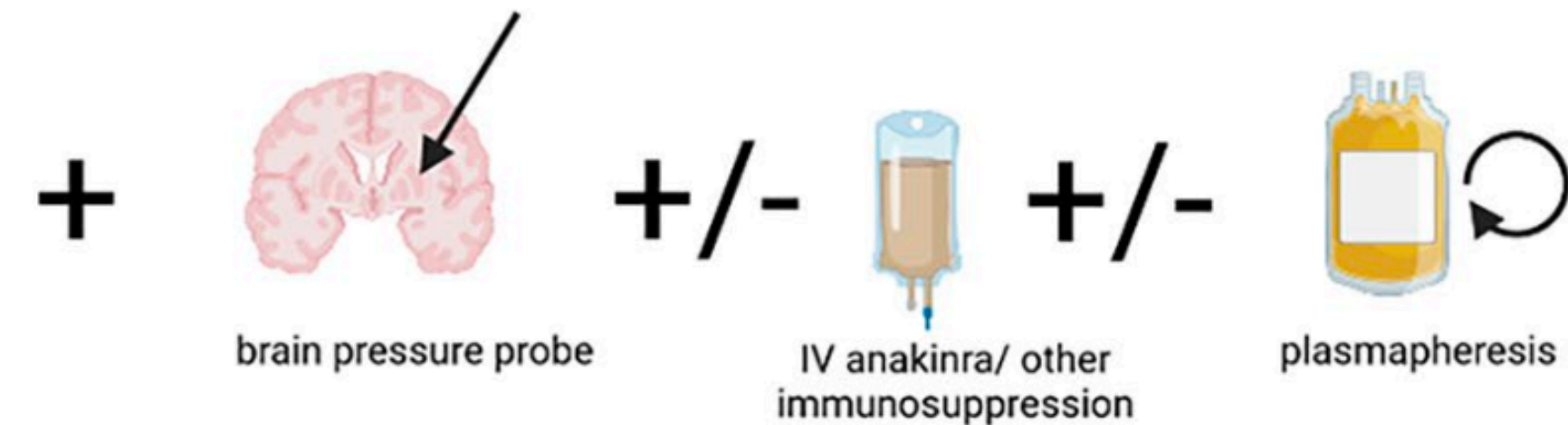
ICE Score not possible

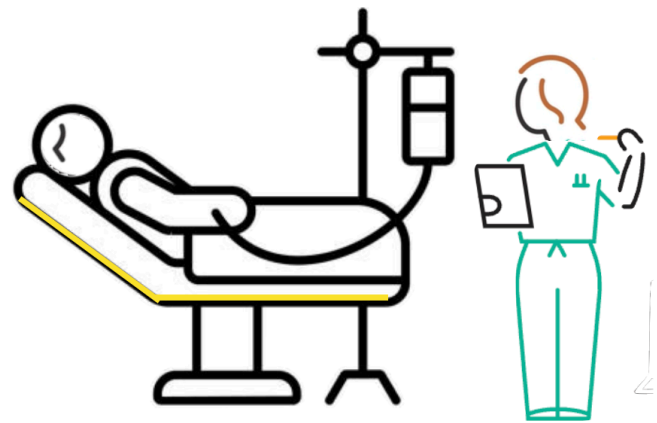


diffuse cerebral edema



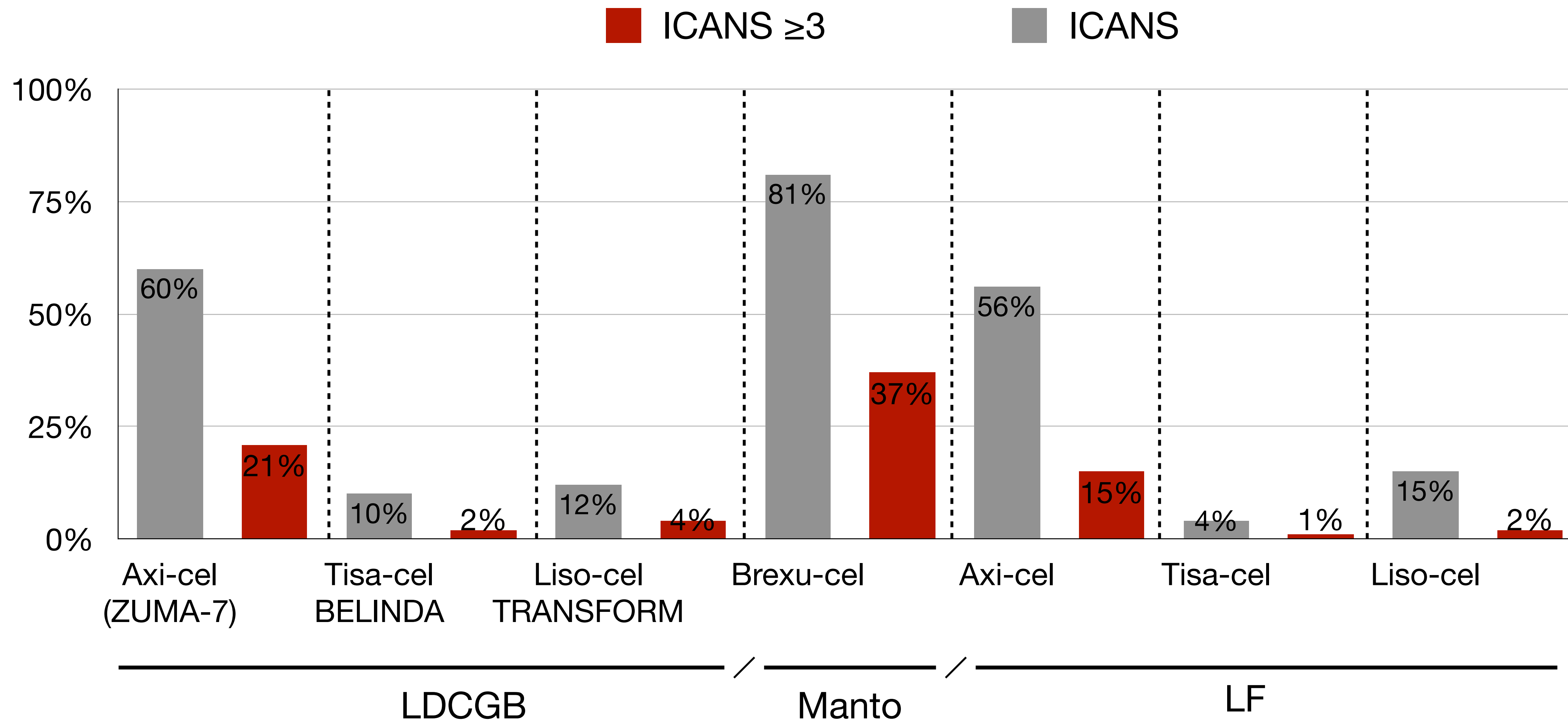
seizures

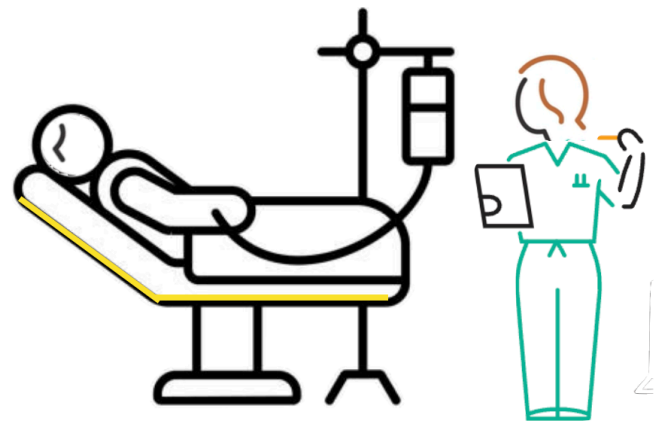




Cuidados tempranos (0 - 30 d)

ICANS





Cuidados tempranos (0 - 30 d)

ICANS

Neurologic event			
Any	65 (64)	37 (37)	28 (28)
Encephalopathy	34 (34)	13 (13)	21 (21)
Confusional state	29 (29)	20 (20)	9 (9)
Tremor	29 (29)	28 (28)	1 (1)
Aphasia	18 (18)	11 (11)	7 (7)
Somnolence	15 (15)	8 (8)	7 (7)
Agitation	9 (9)	5 (5)	4 (4)
Memory impairment	7 (7)	6 (6)	1 (1)
Mental-status change	6 (6)	4 (4)	2 (2)

Los 1erios signos neurológicos incluían dificultades para encontrar palabras (**disfasia**), defectos de atención o **cálculo** (contar hacia atrás de 7 en 7) y dificultad para ejecutar órdenes complejas (**escritura** a mano).

To be completed by patient:

What is today's date: 05.13.24

What is the time: 11:50 am

WRITE "sweet as apple pie" on the line below

sweet as apple pie

To be completed by RN:

Date / Time: _____

To be completed by patient:

WRITE "sweet as apple pie" on the line below

~~Sweet as apple pie~~

To be completed by RN: Normal Abnormal (check one)

RN Signature: [Signature]

Date / Time: April 24 2024

To be completed by patient:

WRITE "sweet as apple pie" on the line below

Sweet as apple pie

To be completed by RN: Normal Abnormal (check one)

Writing Test - Nursing Assessment Tool
POST CAR T-CELL INFUSION ASSESSMENT

Date / Time: 8: 55 88 88 88 88 88 88 88 88 88 88 88

To be completed by patient:

WRITE "sweet as apple pie" on the line below

88 88 88 88 88 88 88 88

To be completed by RN: Normal Abnormal (check one)

RN Signature: [Signature]

Date / Time: _____

To be completed by patient:

WRITE "sweet as apple pie" on the line below

To be completed by RN: Normal Abnormal (check one)

RN Signature: _____

RN to place completed form in the "To be Scanned" tray.

Writing Test - Nursing Assessment Tool
POST CAR T-CELL INFUSION ASSESSMENT

Date / Time: MAY MAY YAY I

To be completed by patient:

WRITE "sweet as apple pie" on the line below

SWEET AS APPLE PIE

To be completed by RN: Normal Abnormal (check one)

RN Signature: [Signature]

Date / Time: MAY MAY YAY I

To be completed by patient:

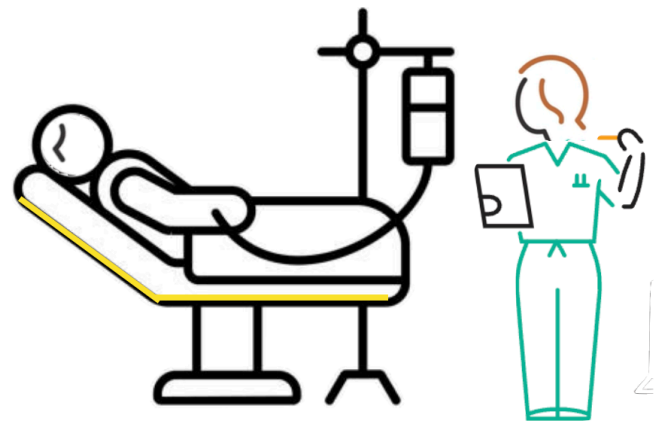
WRITE "sweet as apple pie" on the line below

SWEET AS APPLE PIE

To be completed by RN: Normal Abnormal (check one)

RN Signature: [Signature]

RN to place completed form in the "To be Scanned" tray.



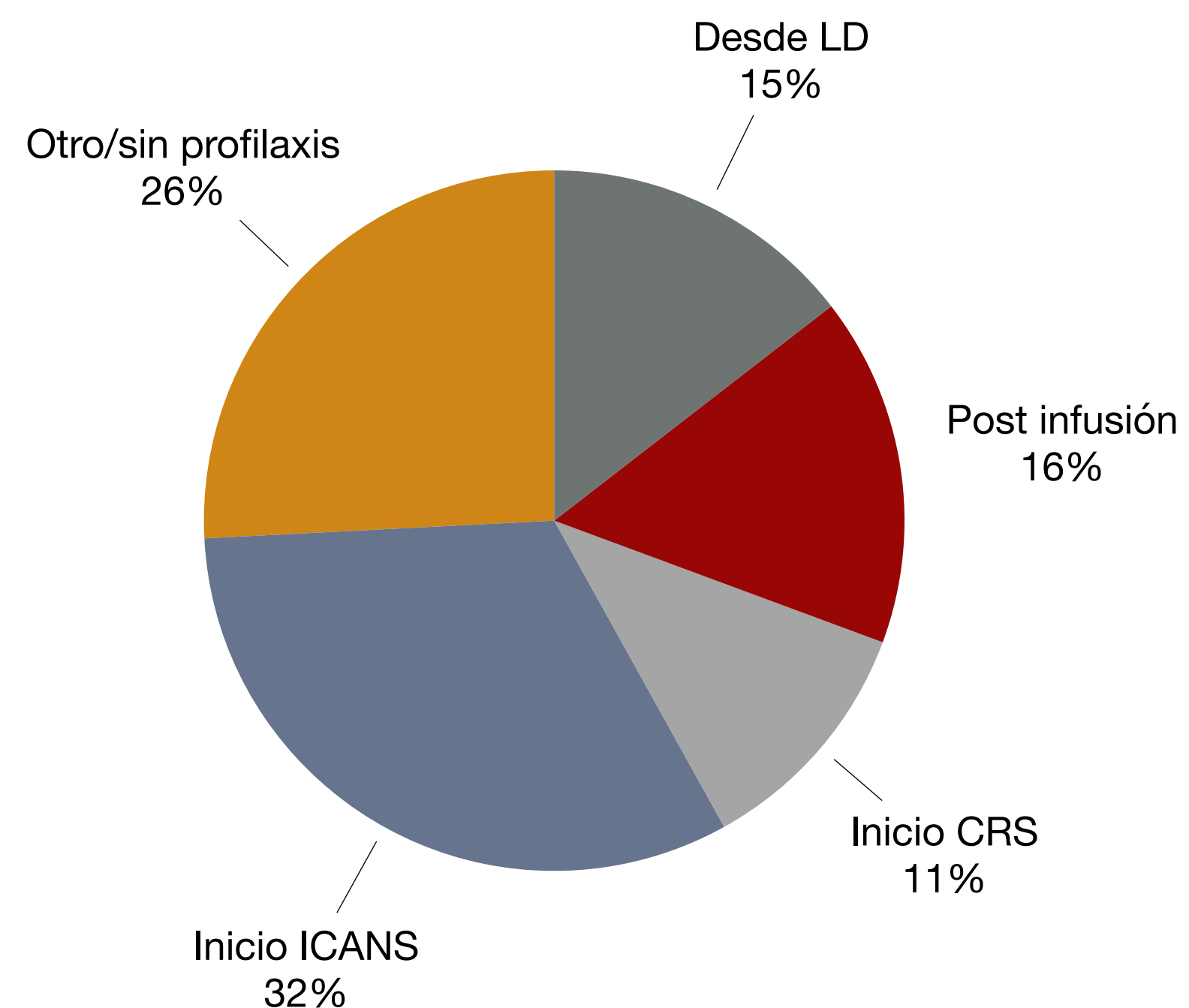
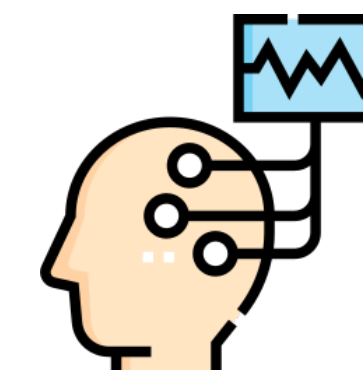
Cuidados tempranos (0 - 30 d)

ICANS



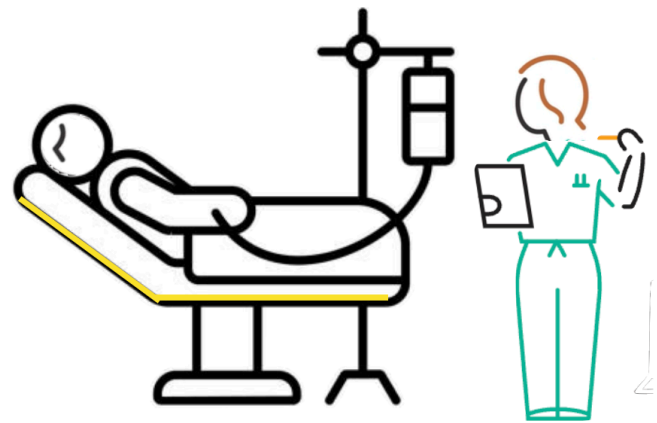
Convulsiones reportadas en% variados inicialmente. Algunos reportes hasta 30%

Cambios EEG frecuentes durante ICANS



Levetiracetam profiláctico

Encuesta EBMT 78 centros



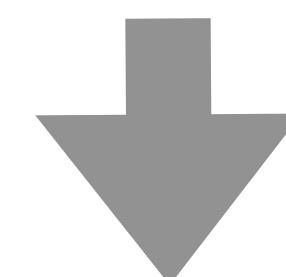
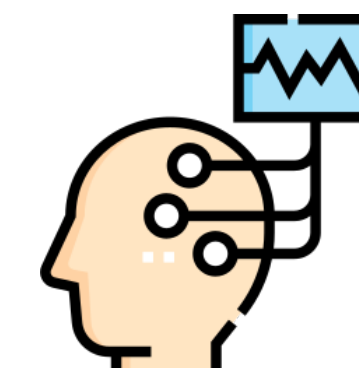
Cuidados tempranos (0 - 30 d)

ICANS



Convulsiones reportadas en% variados inicialmente. Algunos reportes hasta 30%

Cambios EEG frecuentes durante ICANS



Levetiracetam profiláctico

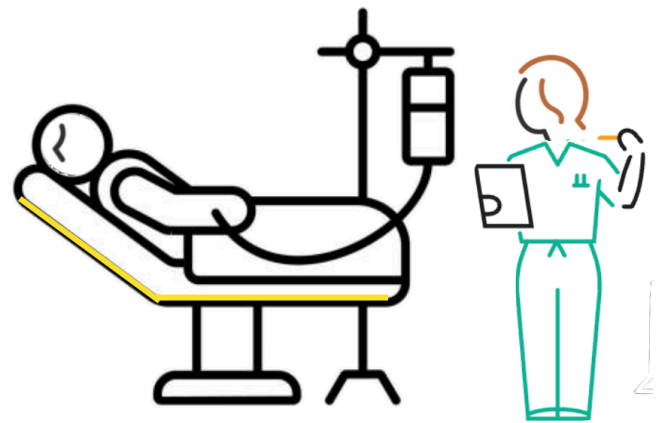
n° 156

Estrategia #1
Desde infusión

2%

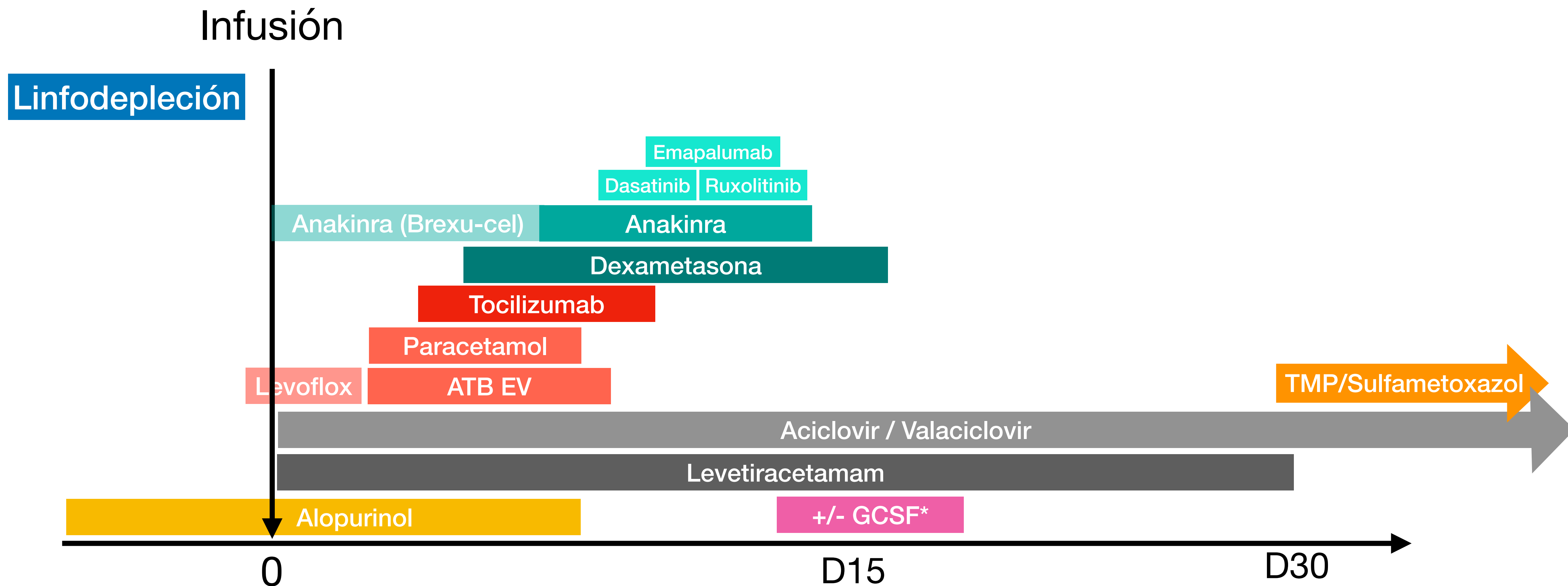
Estrategia #2
Desde inicio ICANS

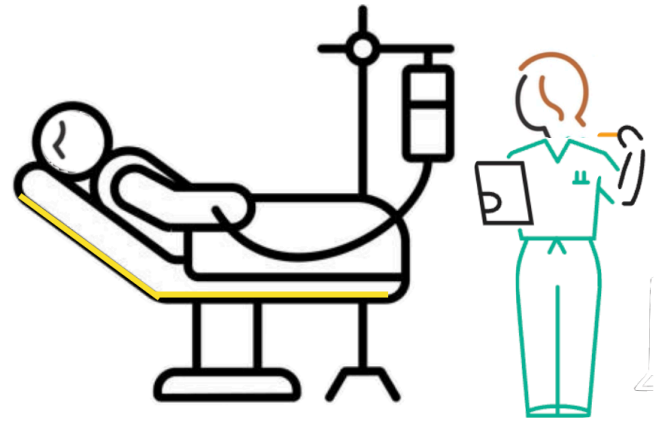
4%



Cuidados tempranos (0 - 30 d)

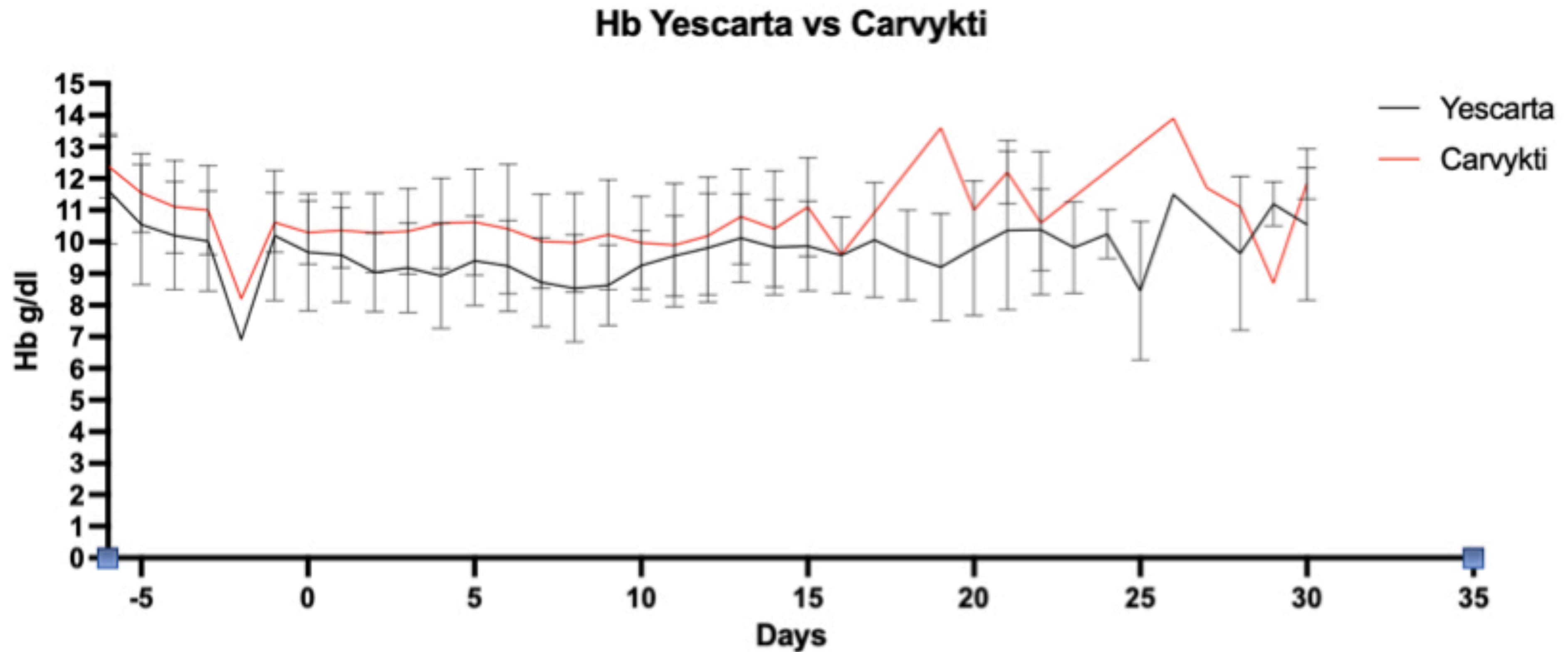
Resumen de las drogas más usadas

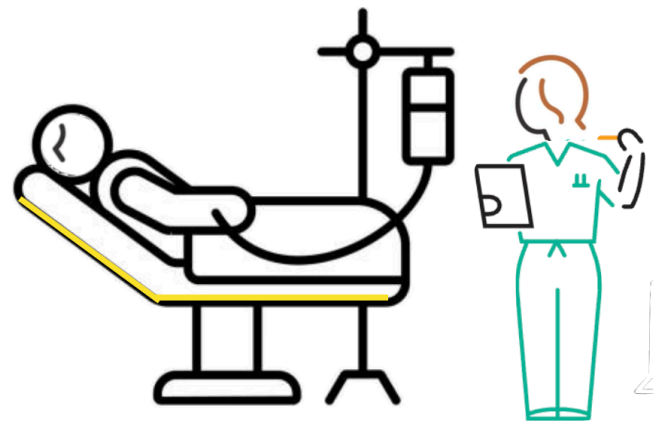




Cuidados tempranos (0 - 30 d)

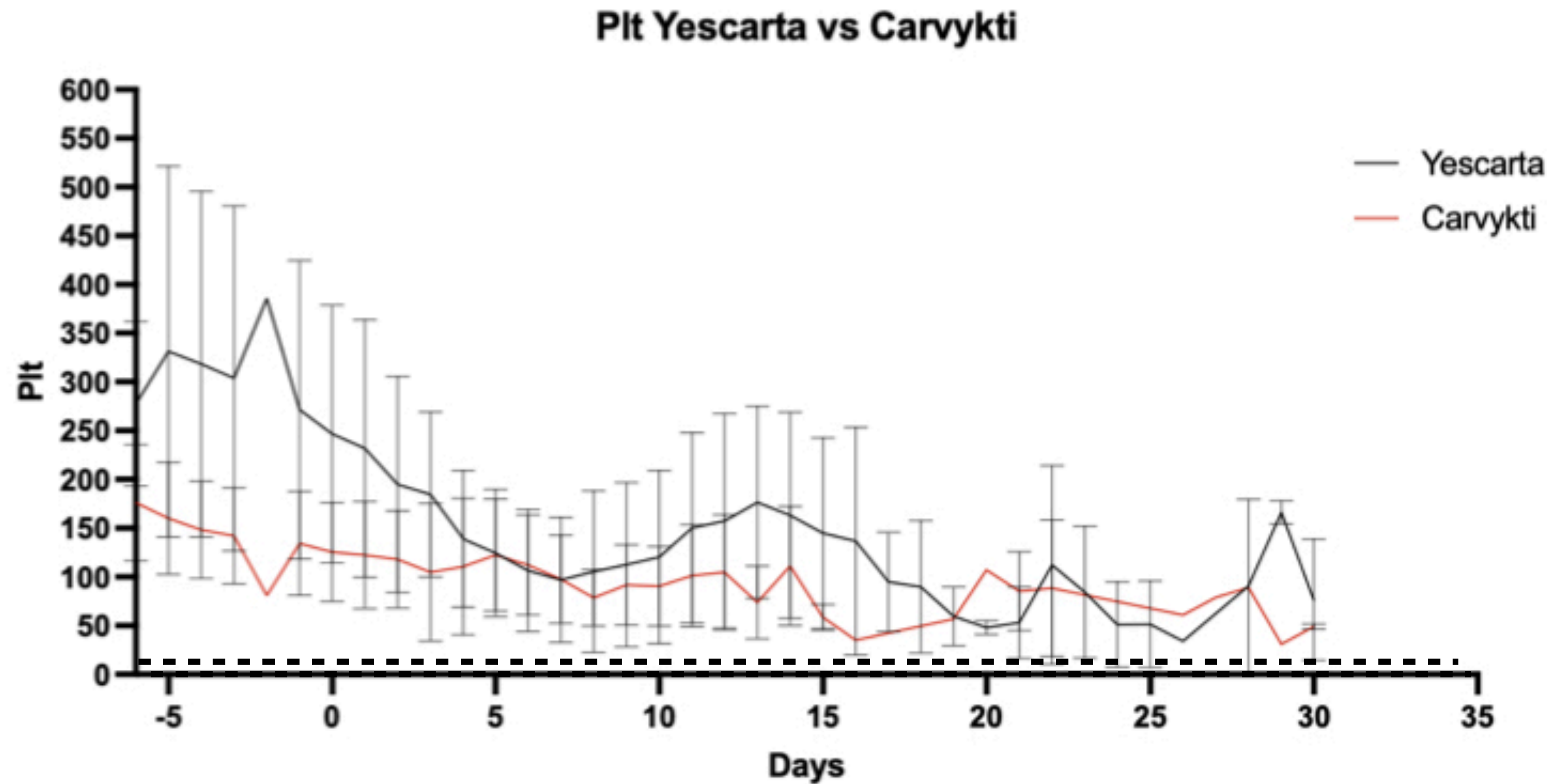
Citopenias & Transfusiones

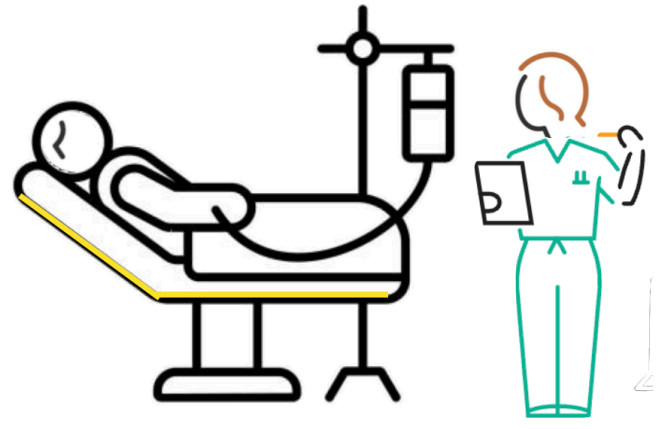




Cuidados tempranos (0 - 30 d)

Citopenias & Transfusiones



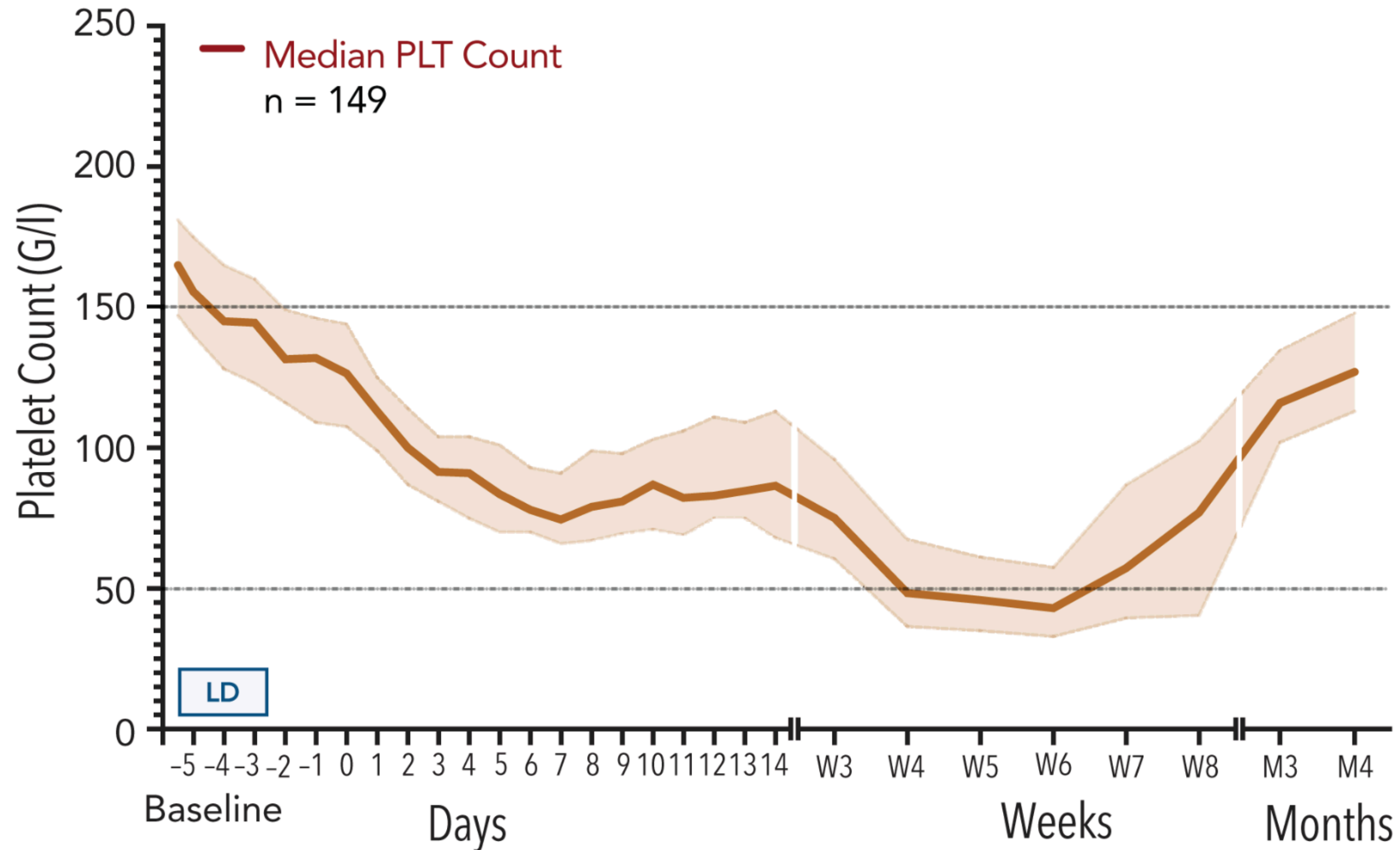


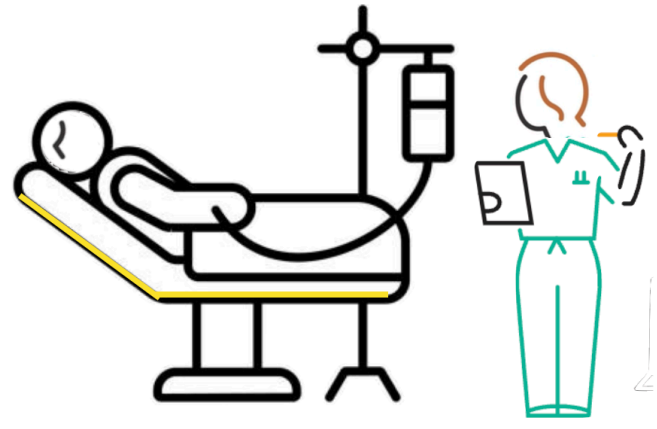
Cuidados tempranos (0 - 30 d)

Citopenias & Transfusiones

E

Aggregate Platelet Count over Time

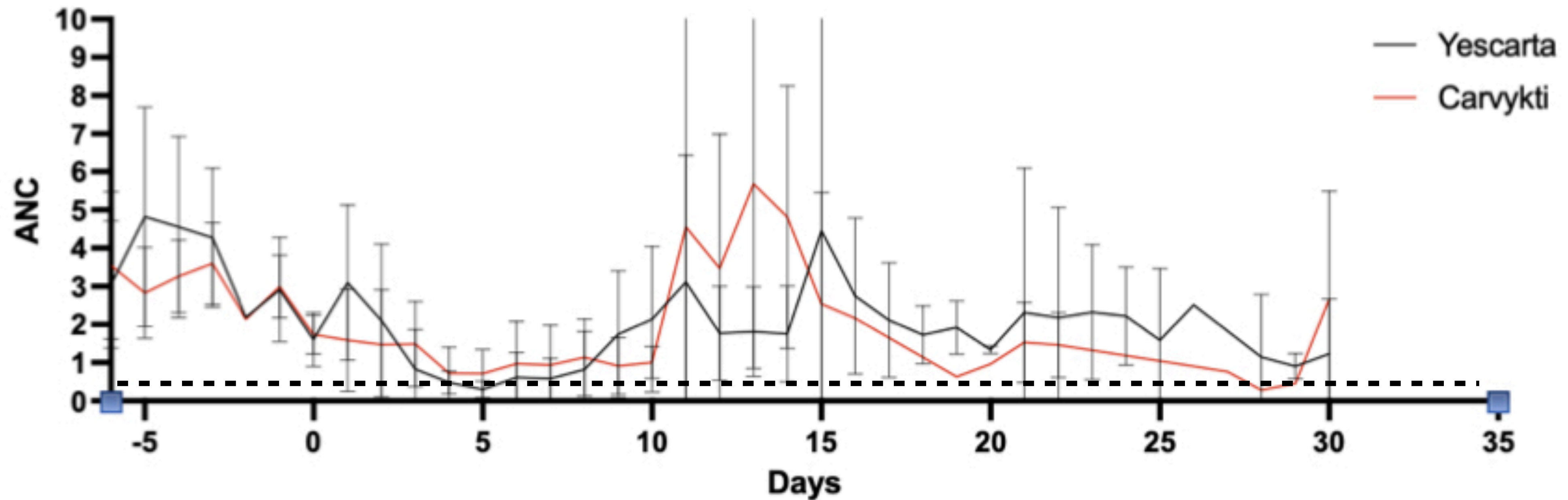


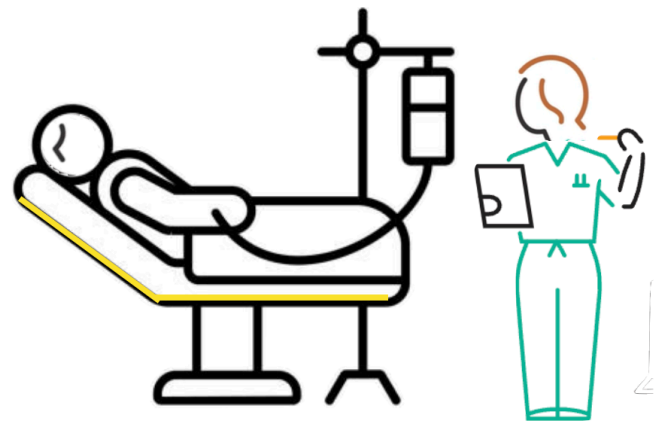


Cuidados tempranos (0 - 30 d)

Citopenias & Transfusiones

(RAN) ANC Yescarta vs Carvykti



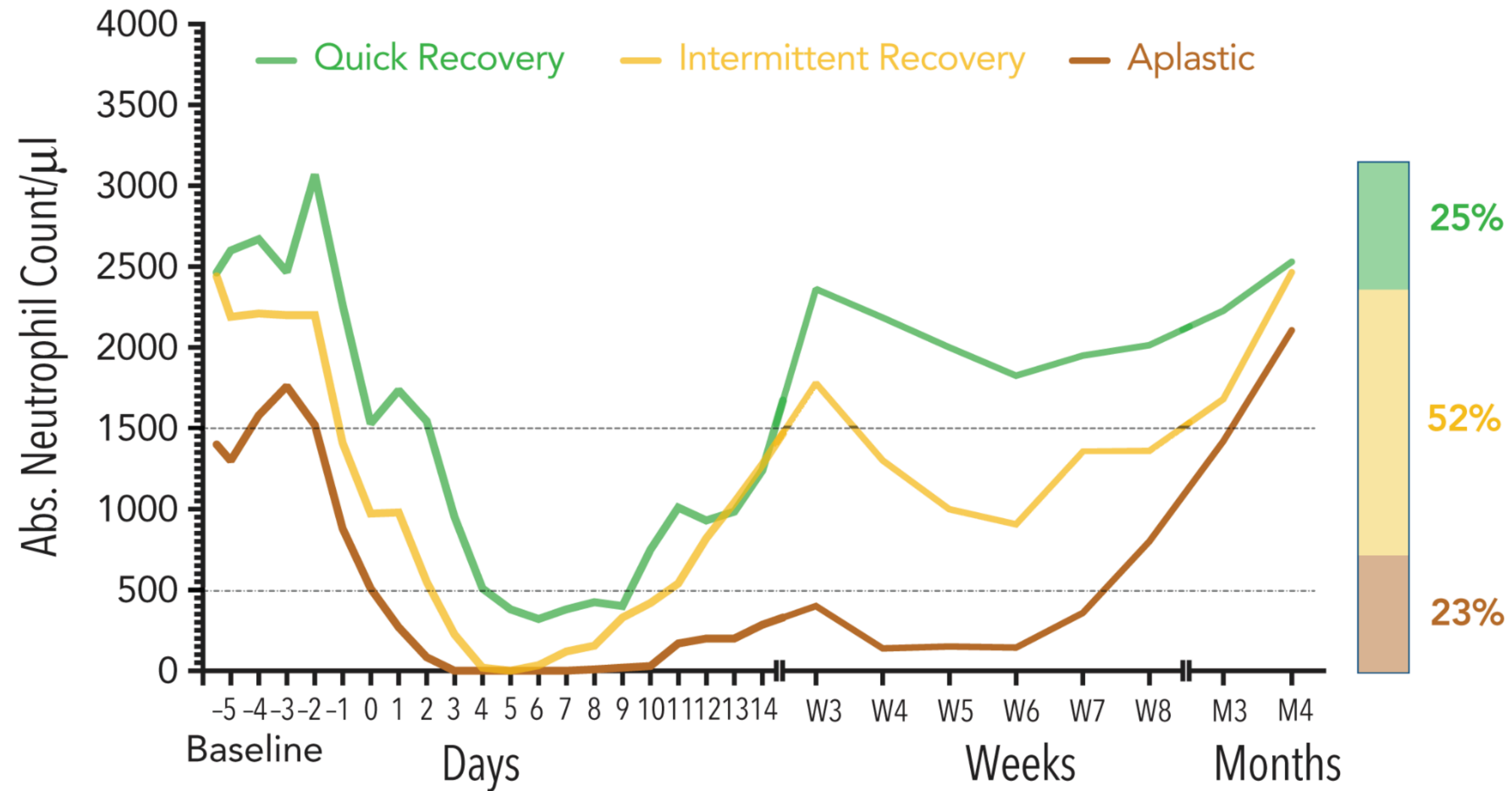


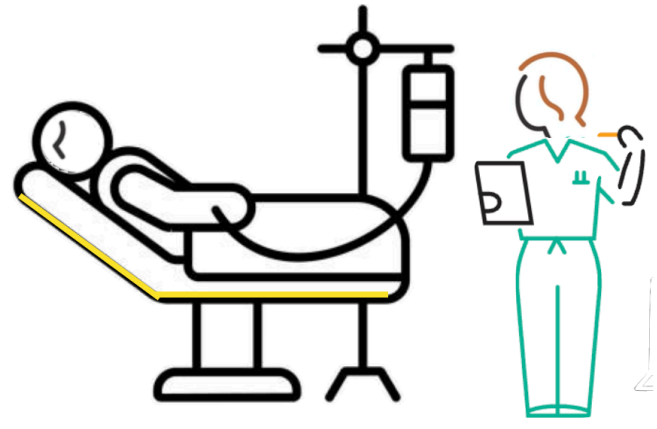
Cuidados tempranos (0 - 30 d)

Citopenias & Transfusiones

D

Aggregate ANC over Time by Phenotype of Neutropenia

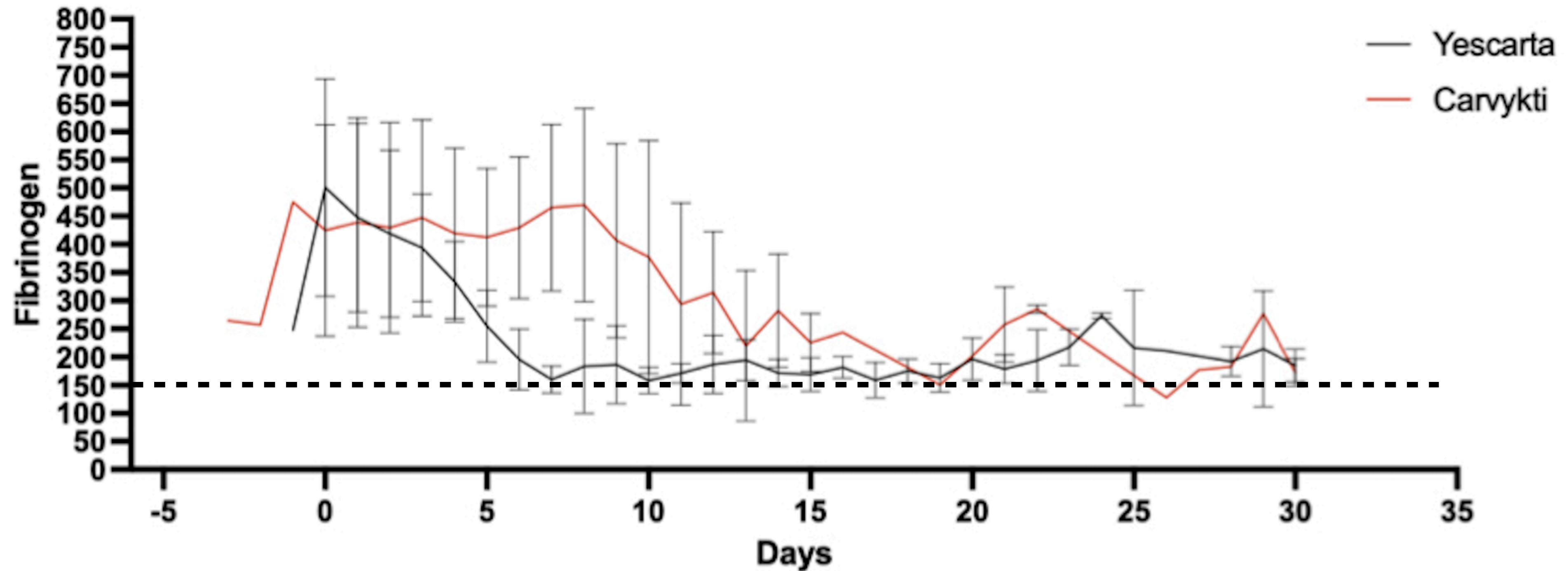


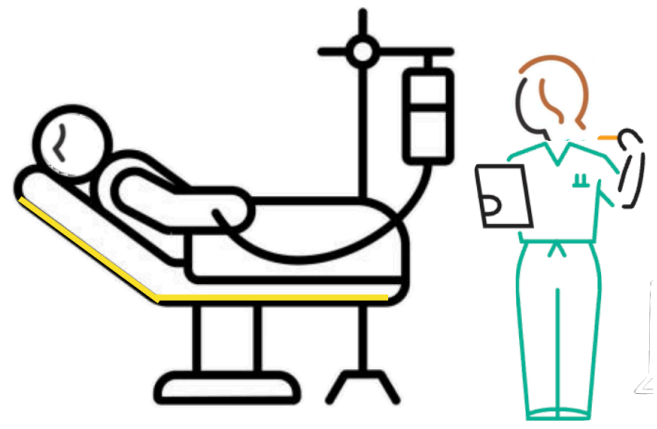


Cuidados tempranos (0 - 30 d)

Citopenias & Transfusiones

FBG Yescarta vs Carvykti

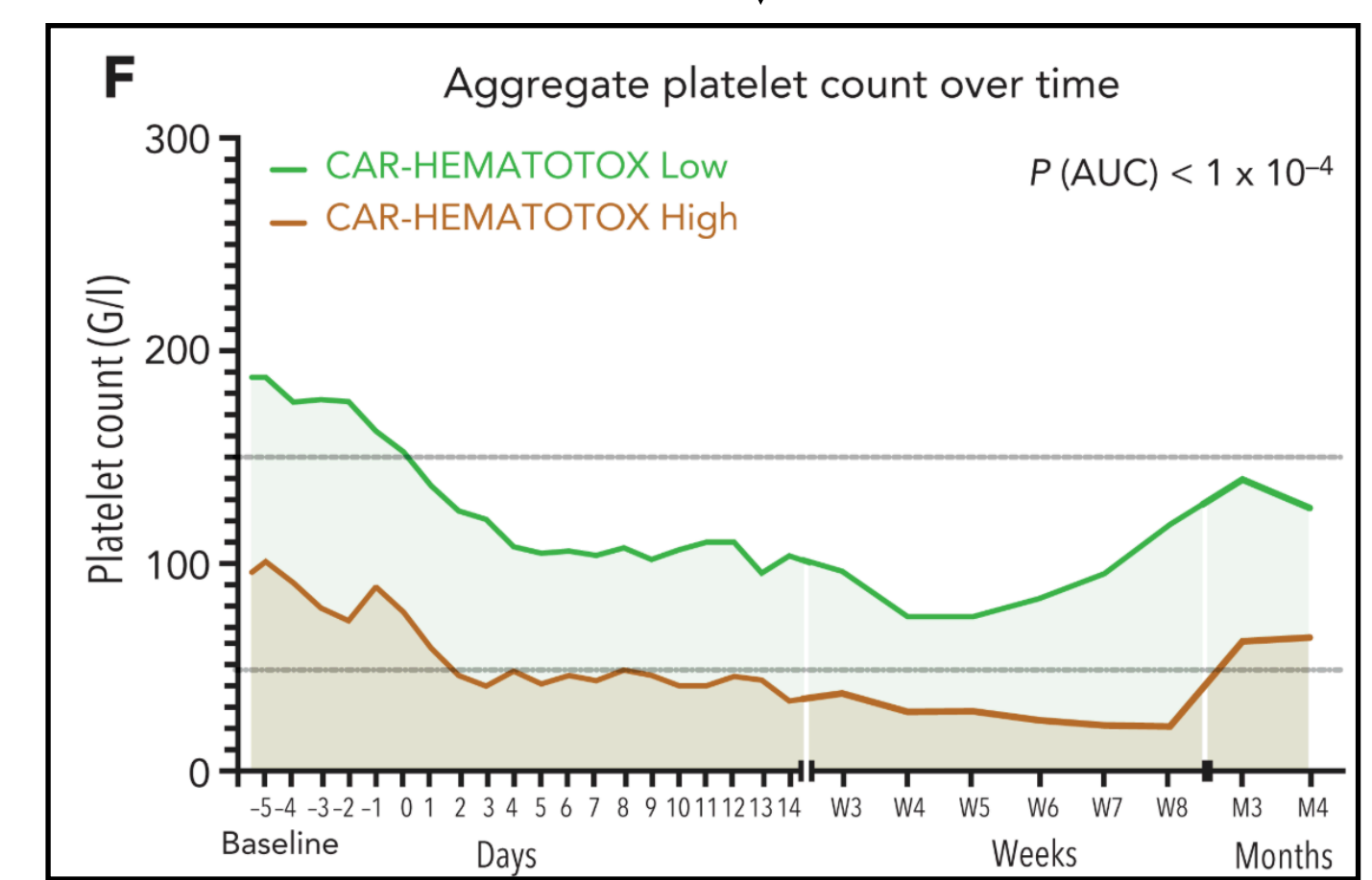
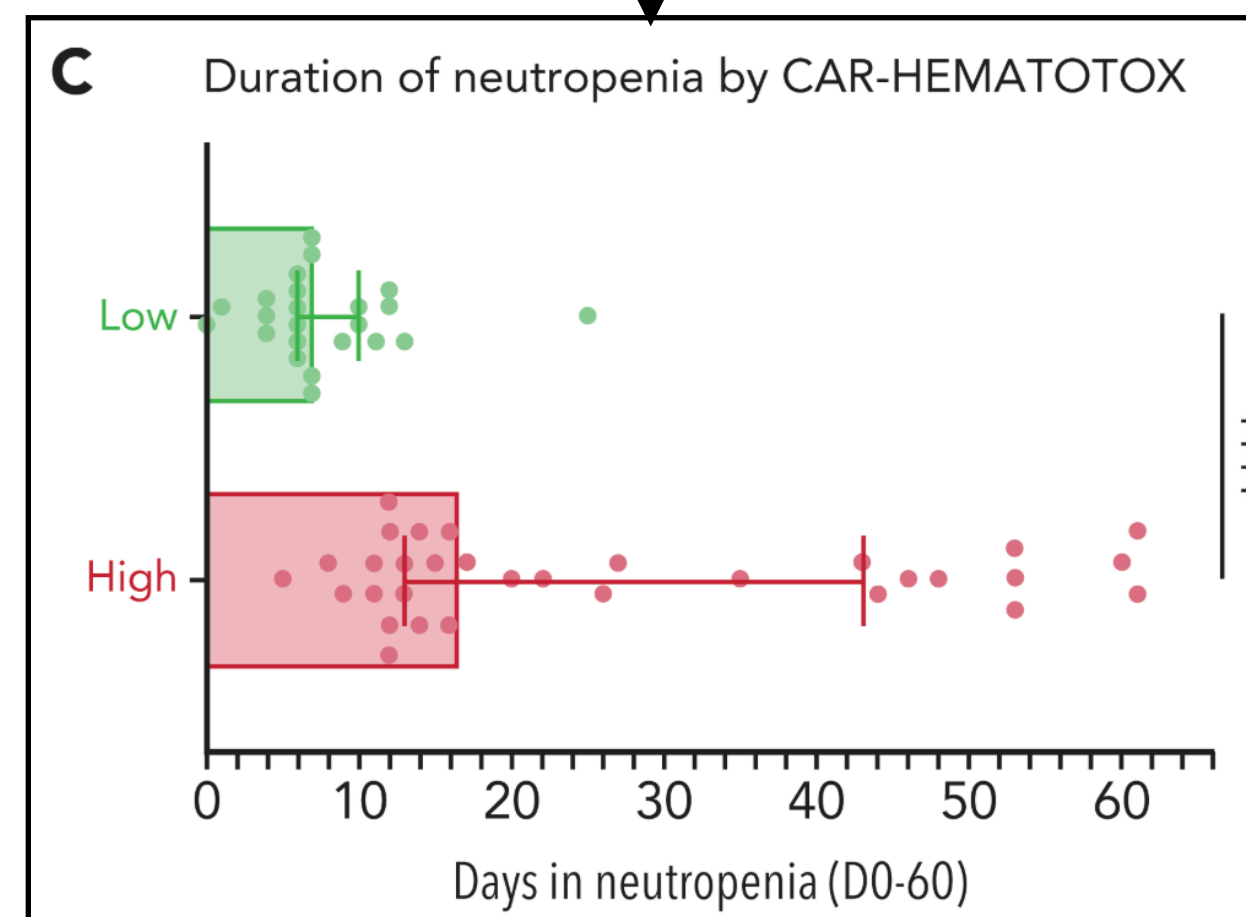
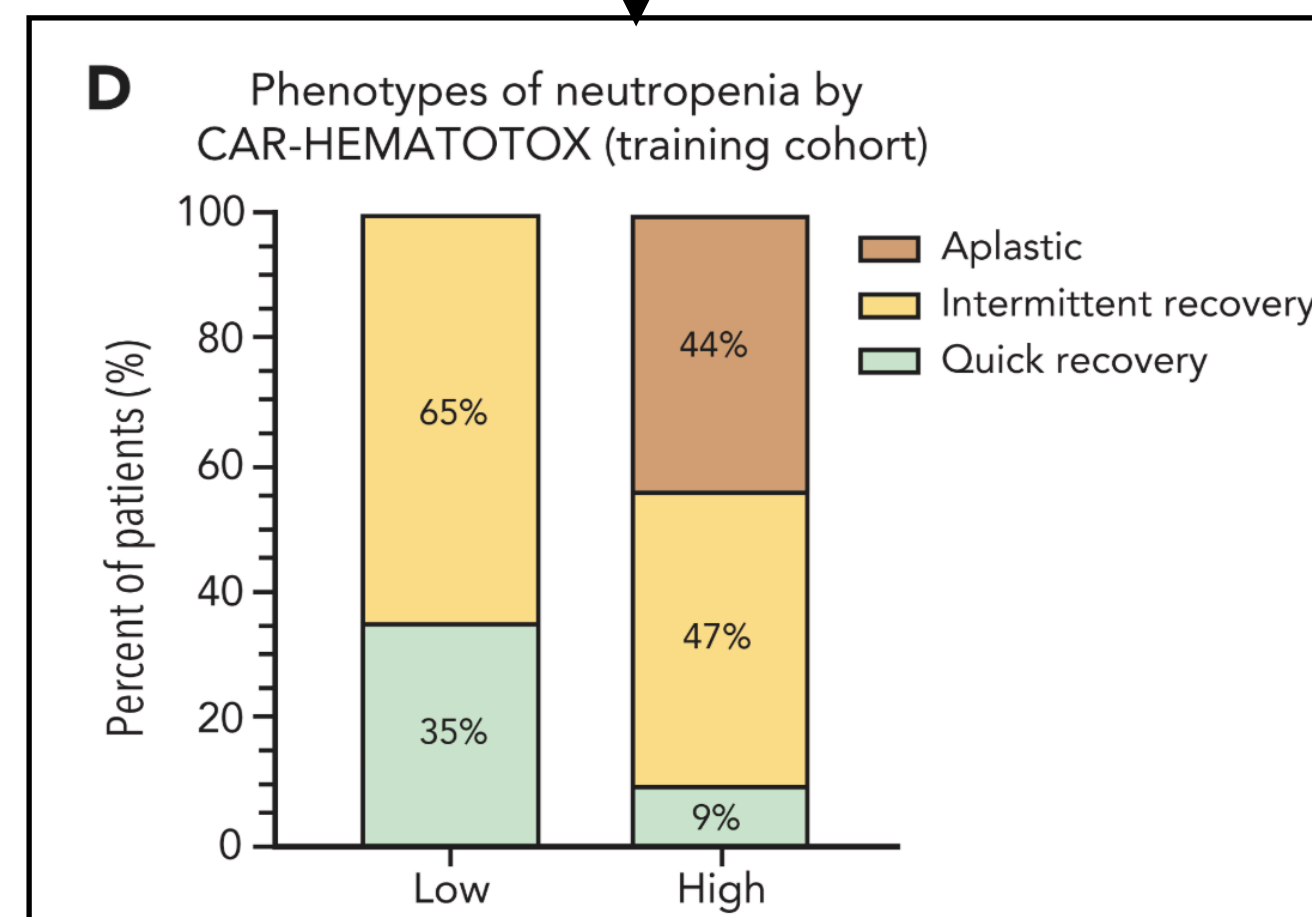


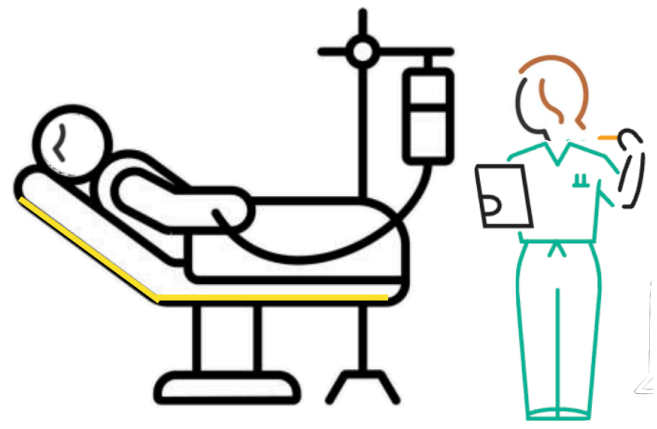


Cuidados tempranos (0 - 30 d)

Citopenias & Transfusiones

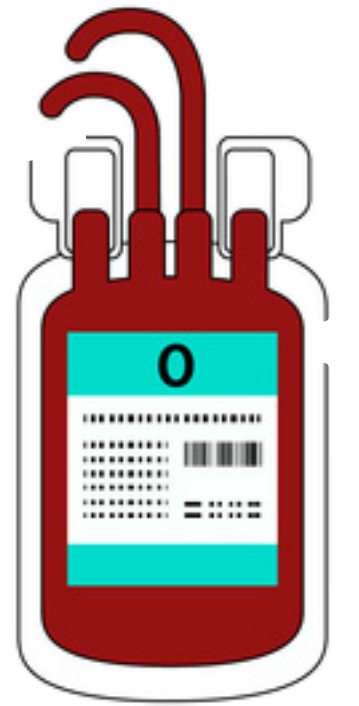
Baseline Features	0 Point	1 Point	2 Points
Platelet Count	> 175,000/ μ l	75,000 – 175,000/ μ l	< 75,000/ μ l
Absolute Neutrophil Count (ANC)	> 1200/ μ l	< 1200/ μ l	-
Hemoglobin	> 9.0 g/dl	< 9.0 g/dl	-
C-reactive protein (CRP)	< 3.0 mg/dl	> 3.0 mg/dl	-
Ferritin	< 650 ng/ml	650 – 2000 ng/ml	> 2000 ng/ml
Low: 0-1		High: ≥ 2	



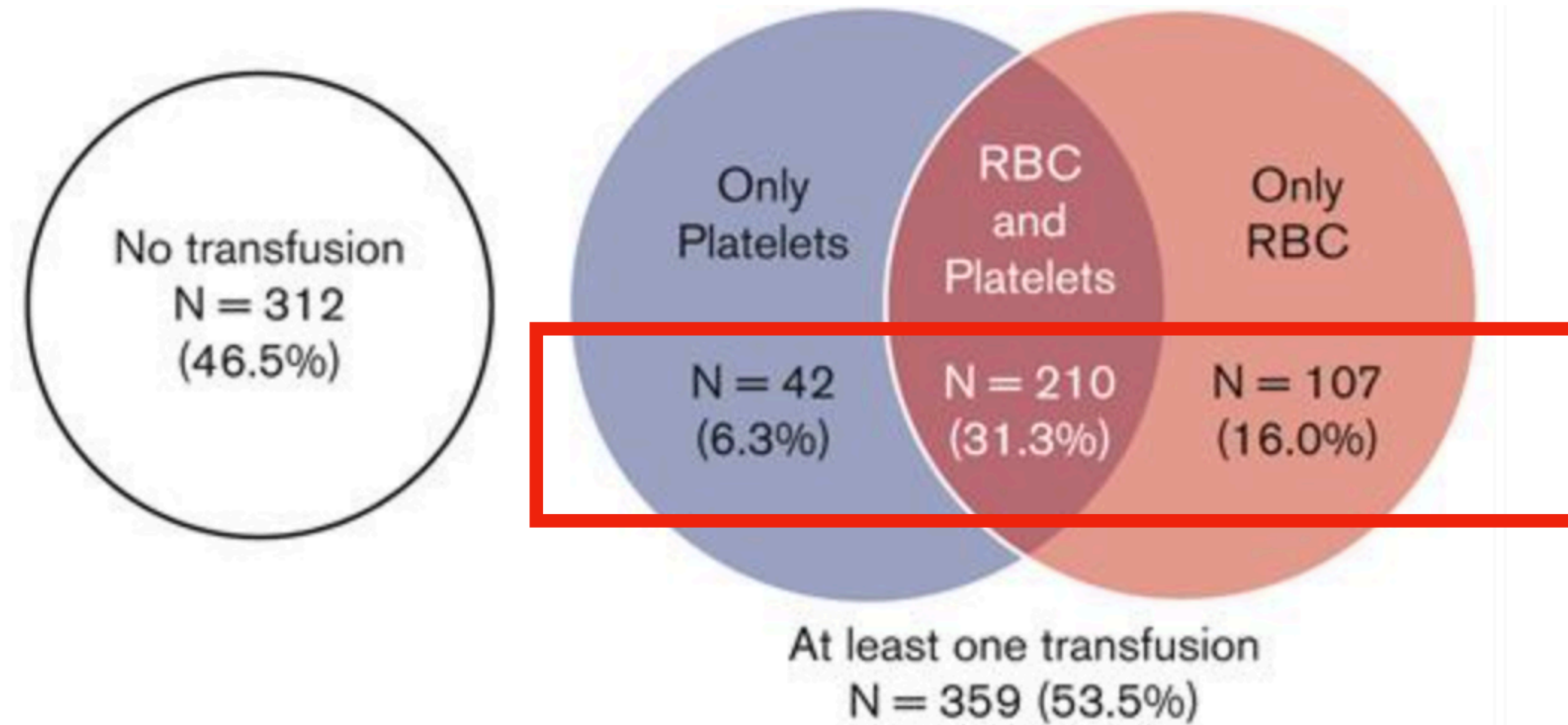


Cuidados tempranos (0 - 30 d)

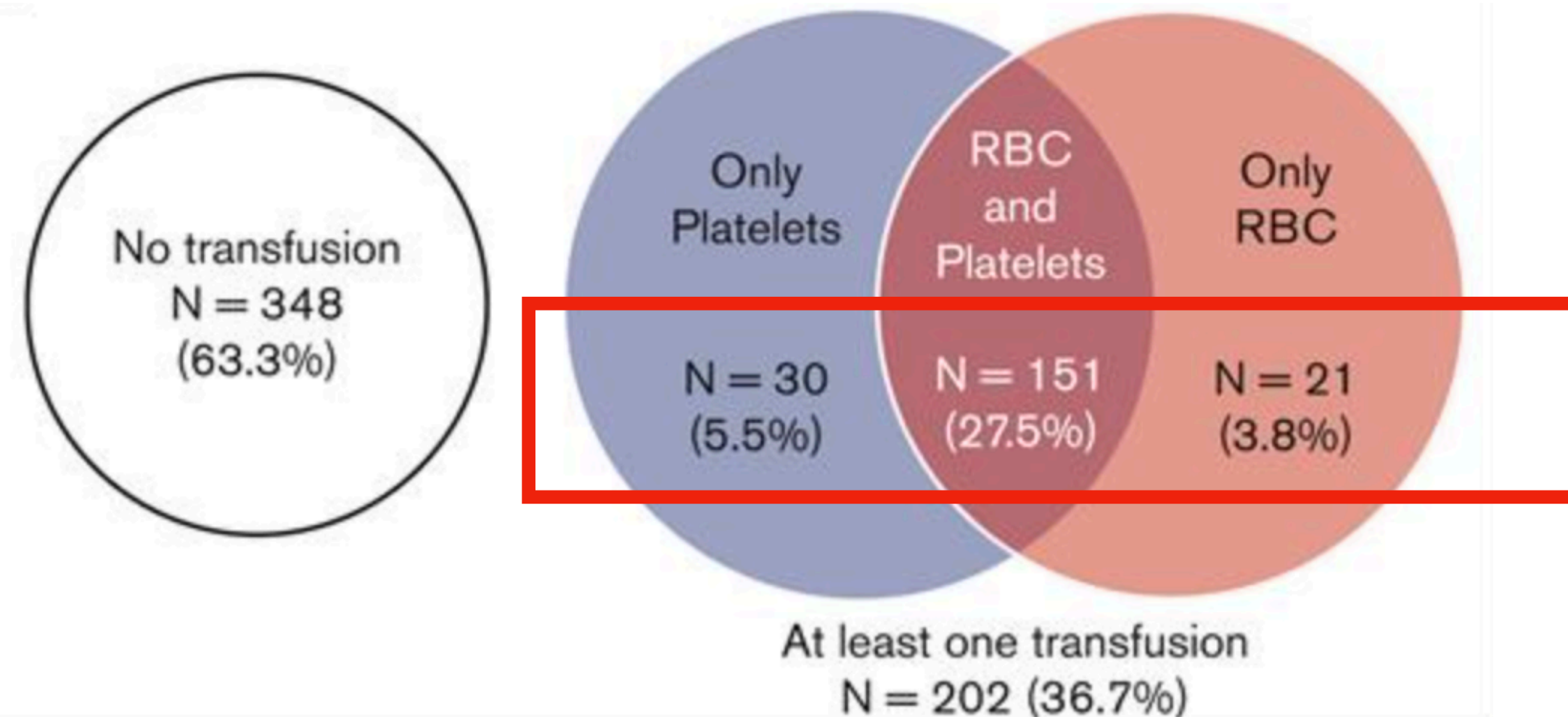
Citopenias & Transfusiones

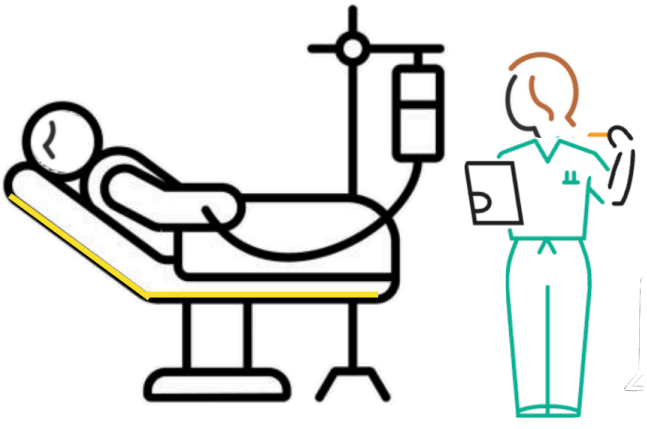


0 - 30 días



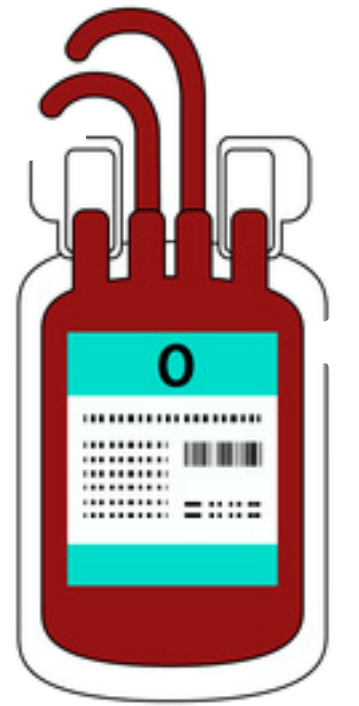
30 - 60 días



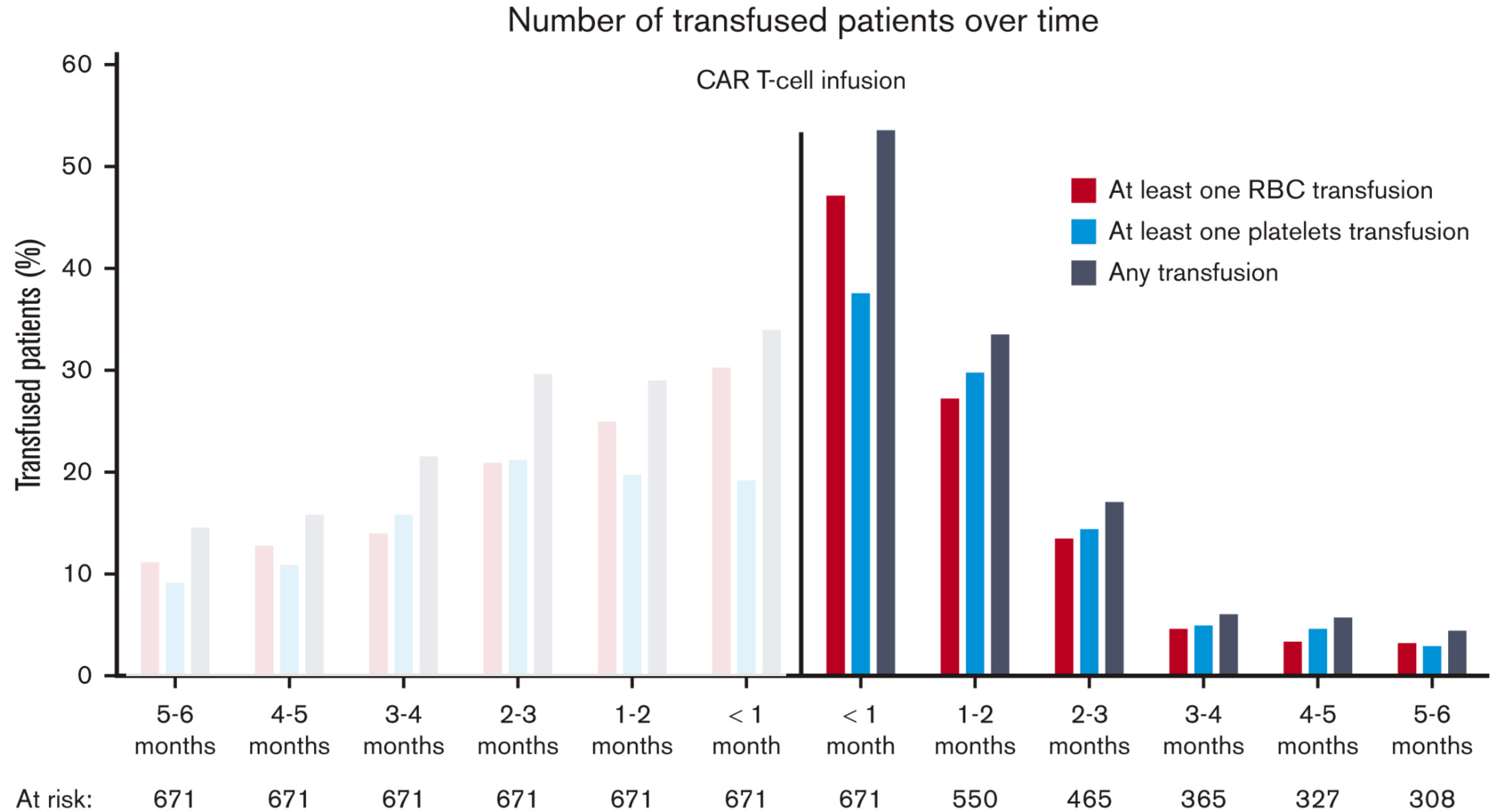


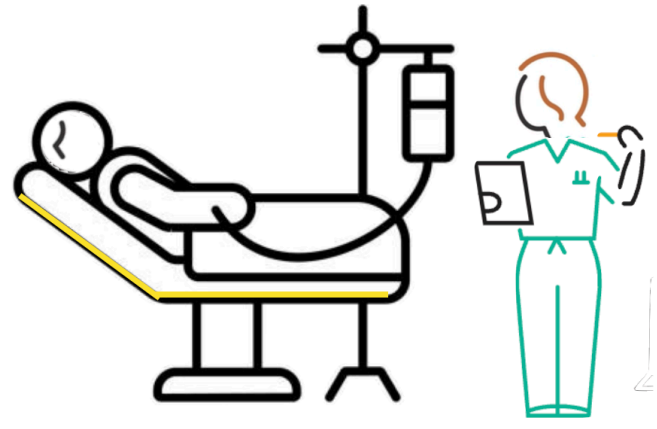
Cuidados tempranos (0 - 30 d)

Citopenias & Transfusiones



A





Cuidados tempranos (0 - 30 d)

Citopenias & Transfusiones

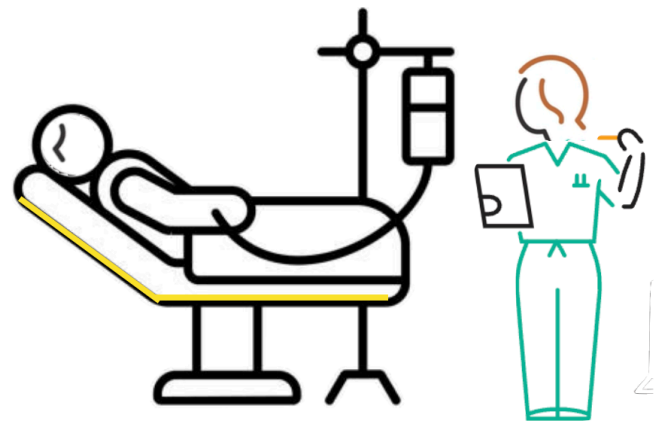


Transfusion in the early phase (<1 month)

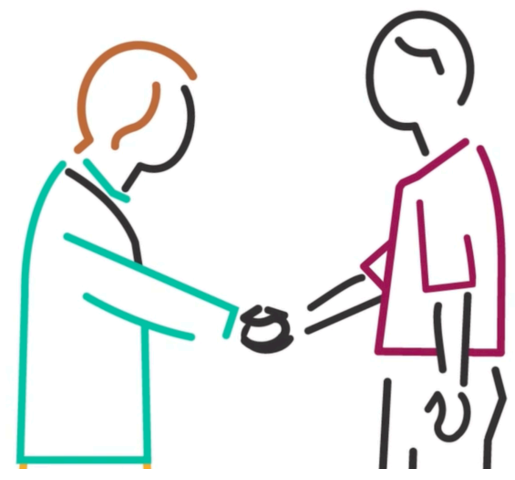
A	RBC		Platelets	
	aOR (95% CI)	P value	aOR (95% CI)	P value
Age >60 y at infusion	2.06 (1.38-3.07)	.0004	1.61 (1.09-2.38)	.0175
≥1 transfusion (RBC or platelets) within 6 mo before CAR T-cell therapy	9.71 (6.37-14.71)	<.0001	7.35 (4.74-11.49)	<.0001
High (≥2) CAR-HEMATOTOX score	2.01 (1.34-3.01)	.0007	2.42 (1.60-3.66)	<.0001
Treatment with axi-cel (vs tisa-cel)	2.02 (1.34-3.05)	.0008	2.12 (1.40-3.19)	.0004
ECOG PS ≥2 at infusion	2.86 (1.62-5.04)	.0004	2.28 (1.35-3.87)	.0028

Transfusion in the late phase (≥1 mo)

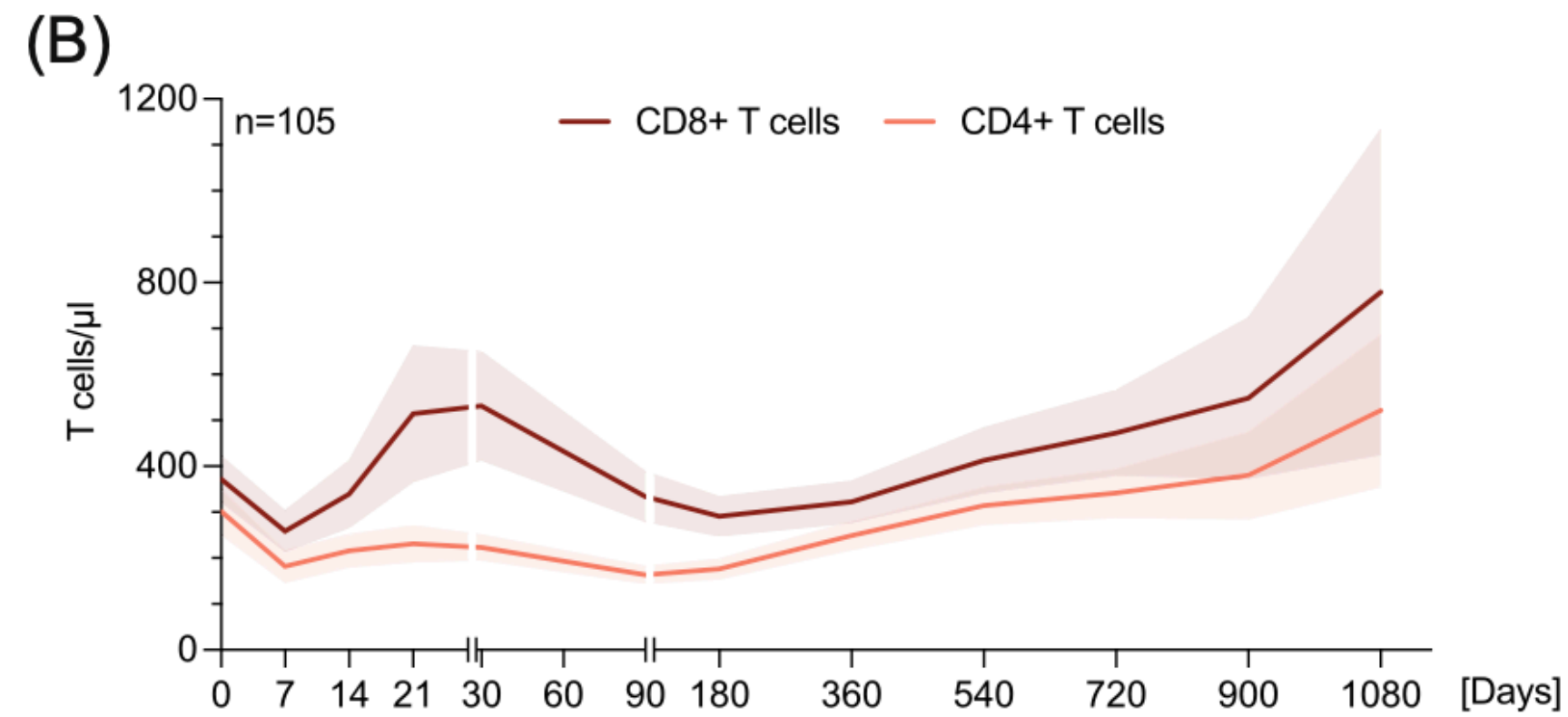
B	RBC		Platelets	
	aOR (95% CI)	P value	aOR (95% CI)	P value
≥1 transfusion (RBC or platelets) within 6 mo before CAR T-cell therapy	5.43 (3.37-8.85)	<.0001	7.75 (4.65-12.99)	<.0001
High (≥2) CAR-HEMATOTOX score	1.98 (1.27-3.09)	.0026	2.15 (1.37-3.37)	.0008
ICANS grade ≥3	3.01 (1.62-5.59)	.0005	NS	
Tocilizumab use	NS		1.85 (1.15-2.98)	.0118



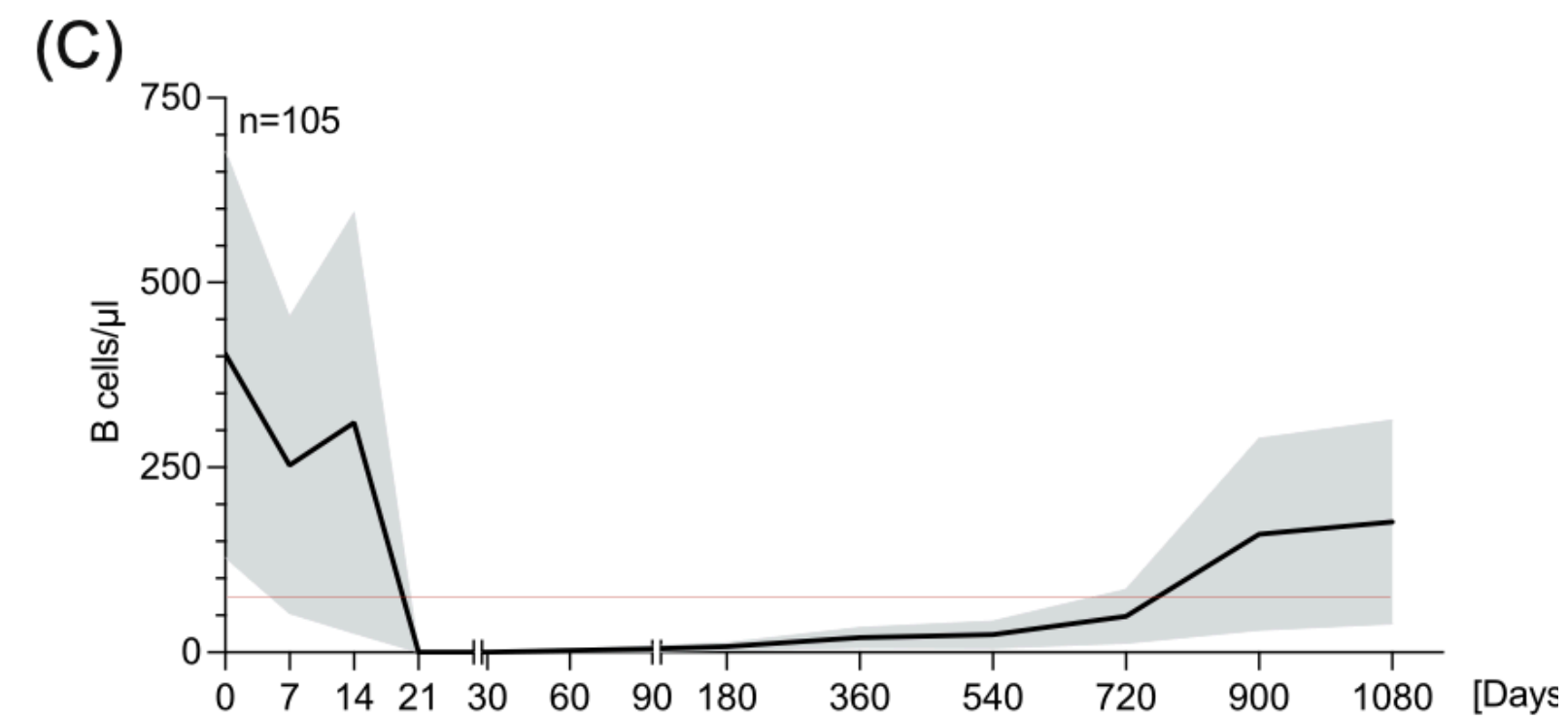
Cuidados tempranos (0 - 30d) y seguimiento (>30d)



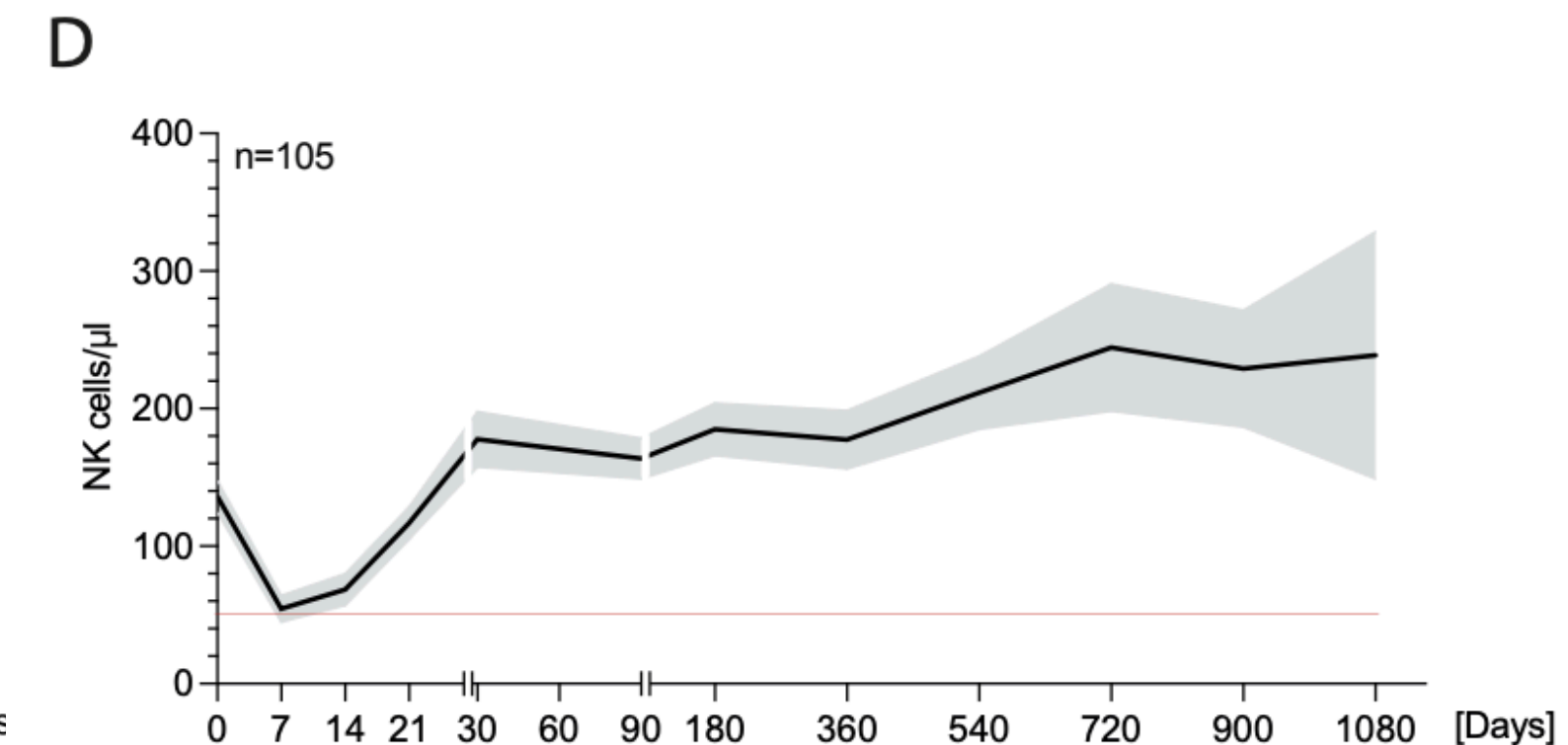
Reconstitución inmune & infecciones



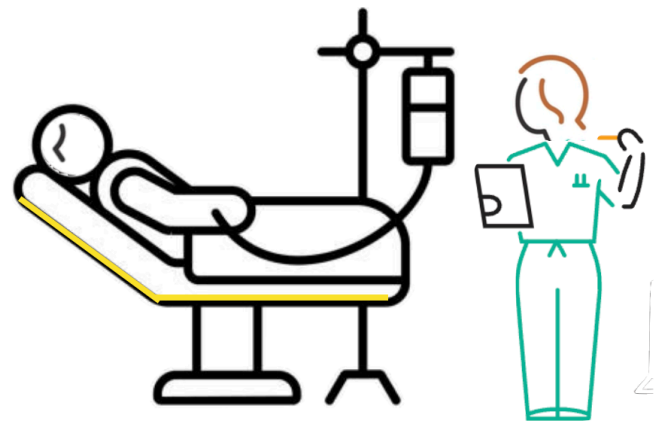
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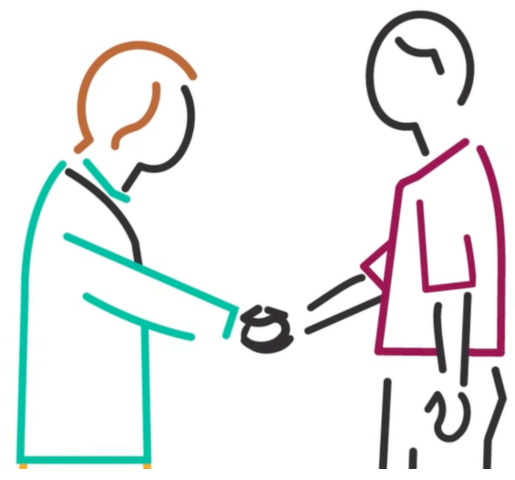
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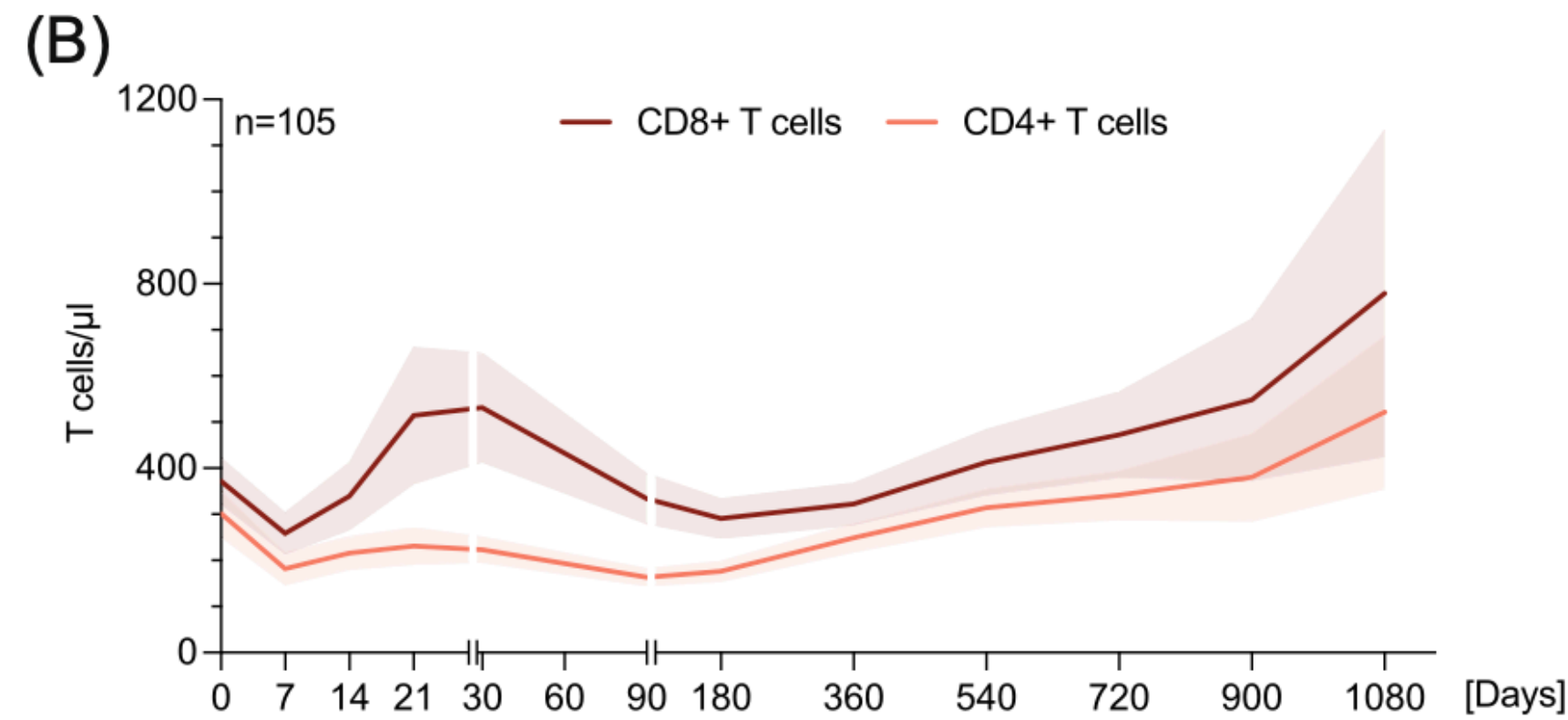
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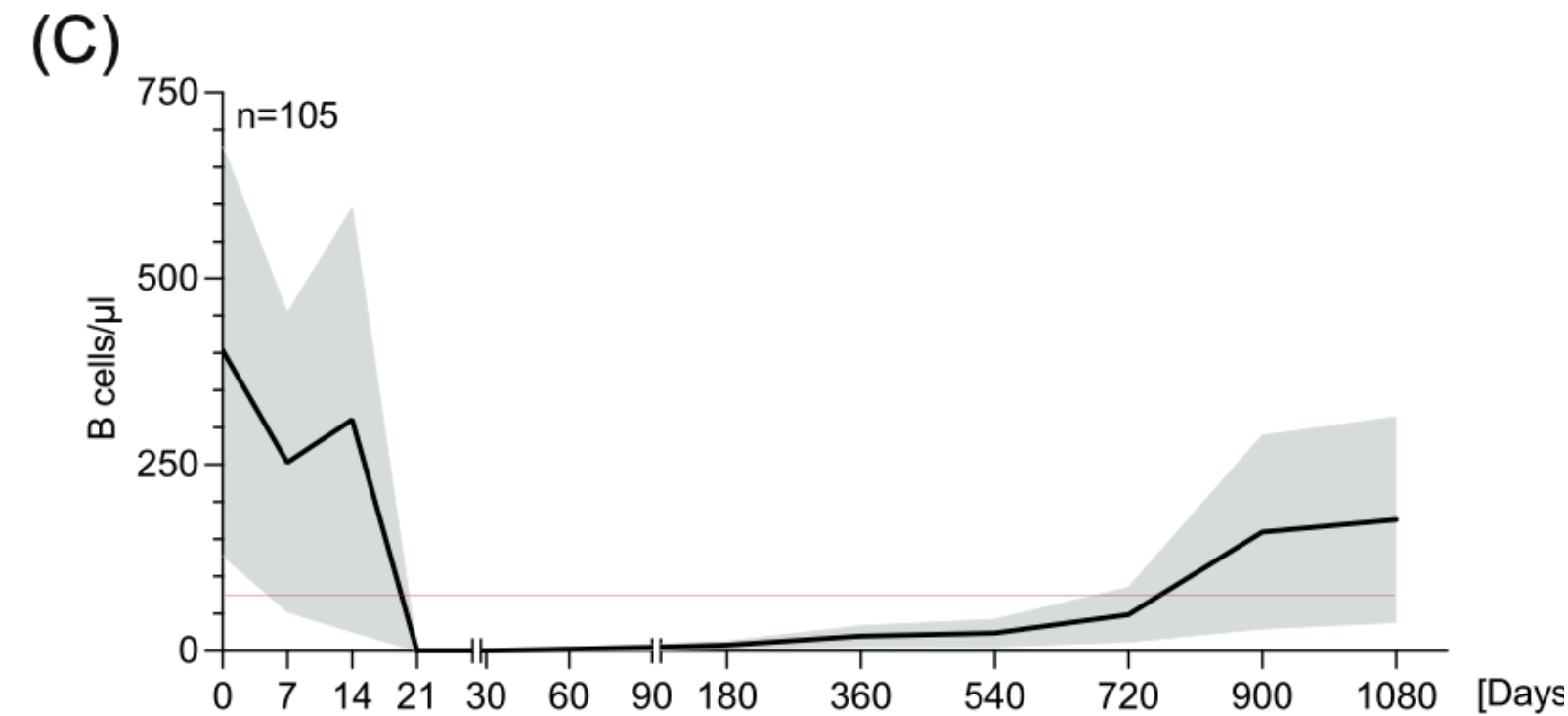
Cuidados tempranos (0 - 30d) y seguimiento (>30d)



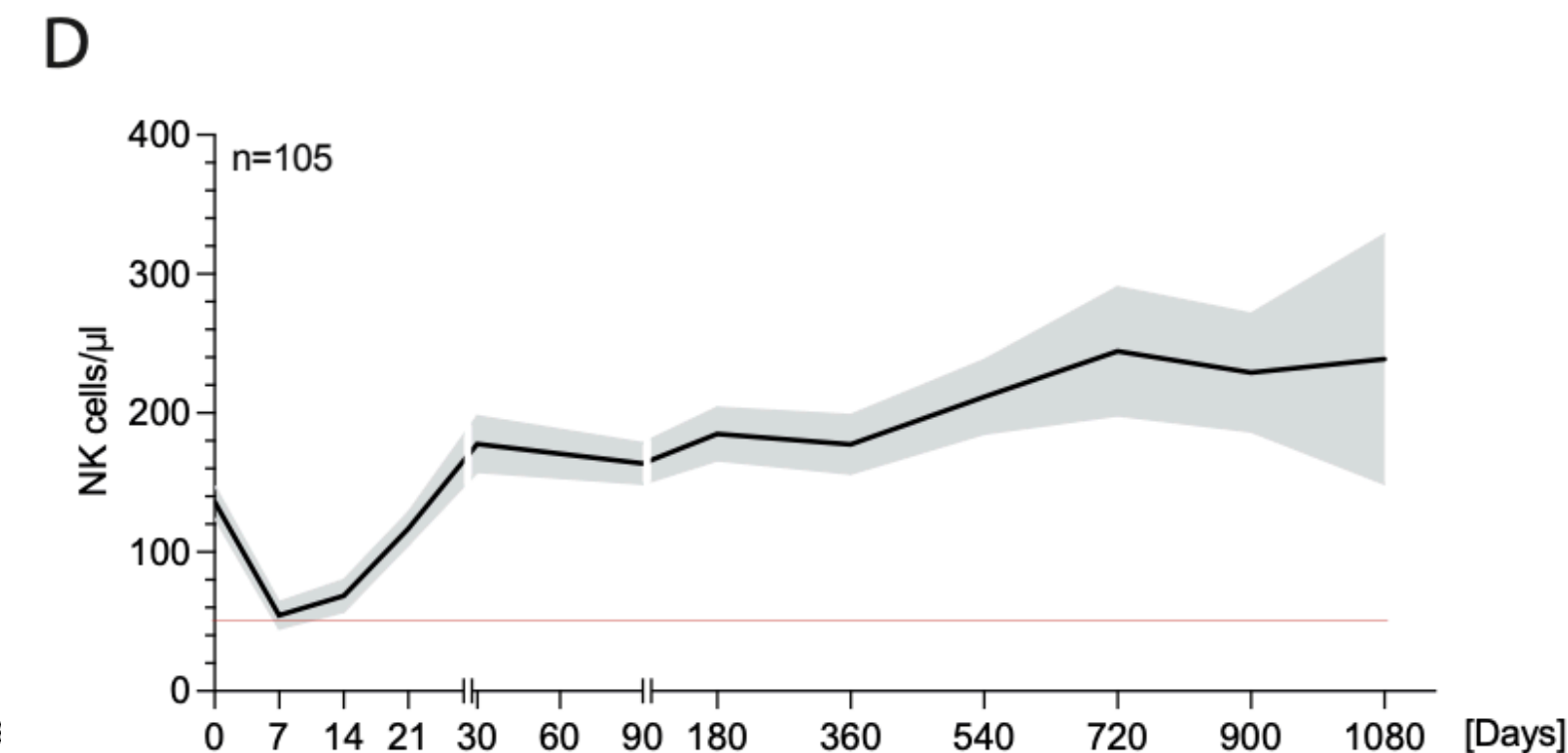
Reconstitución inmune & infecciones



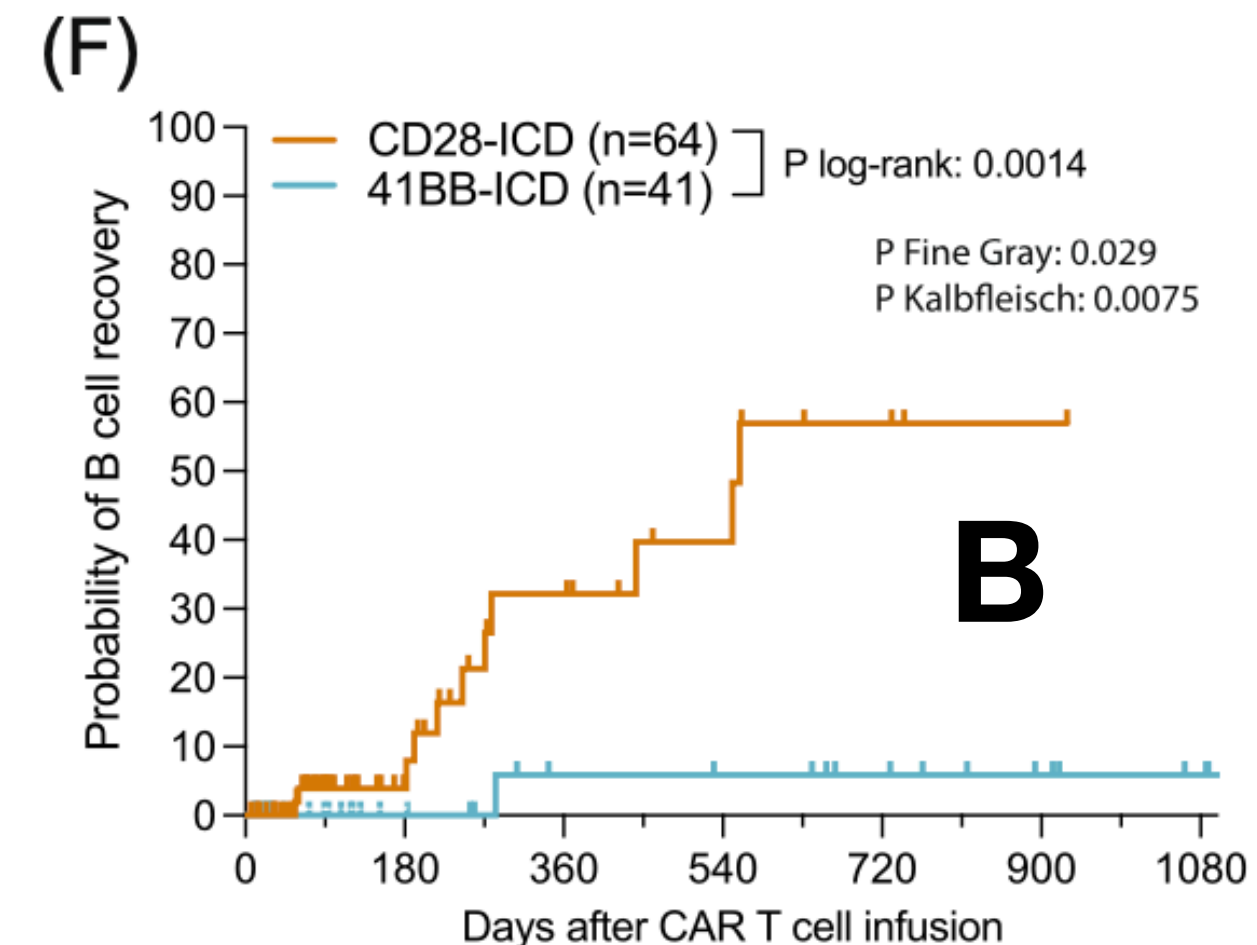
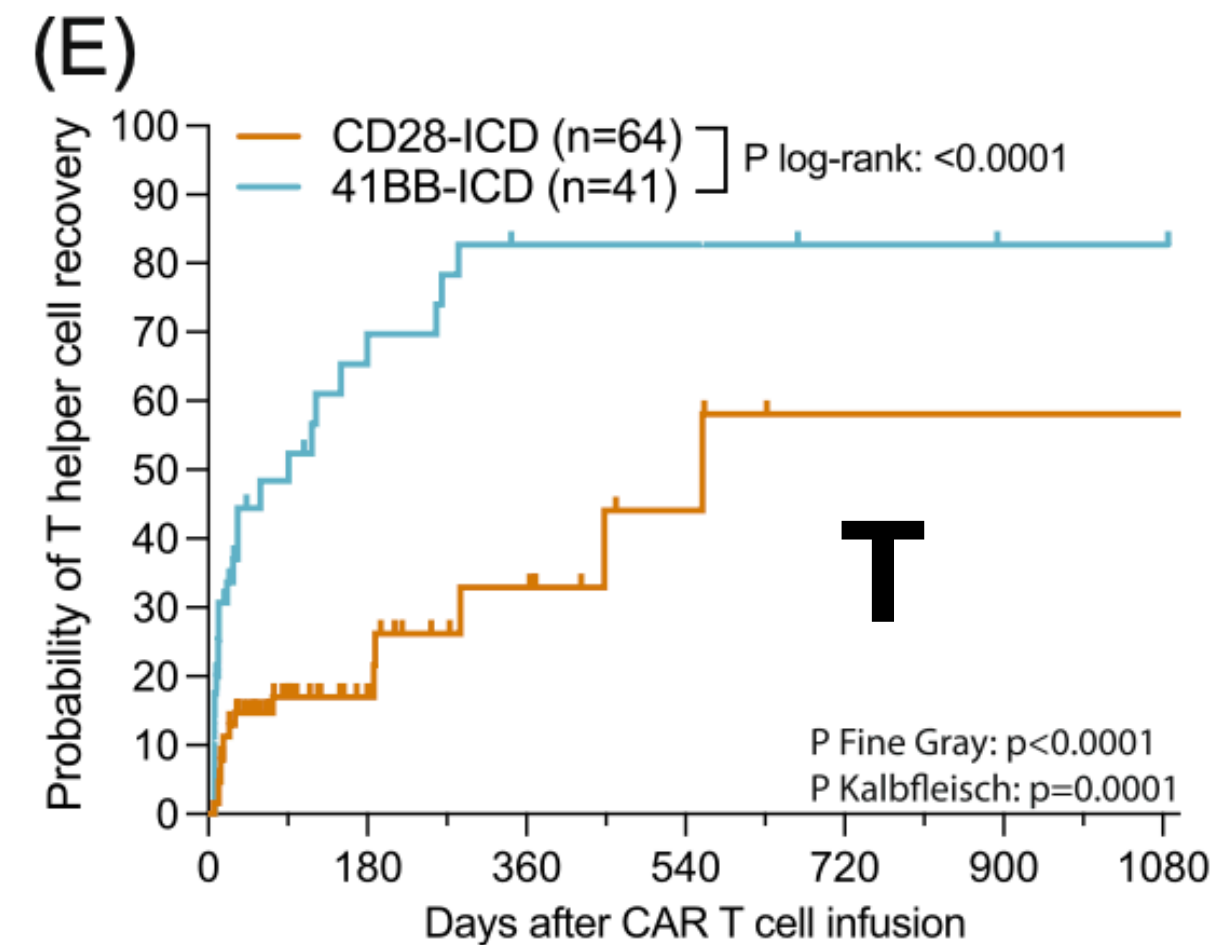
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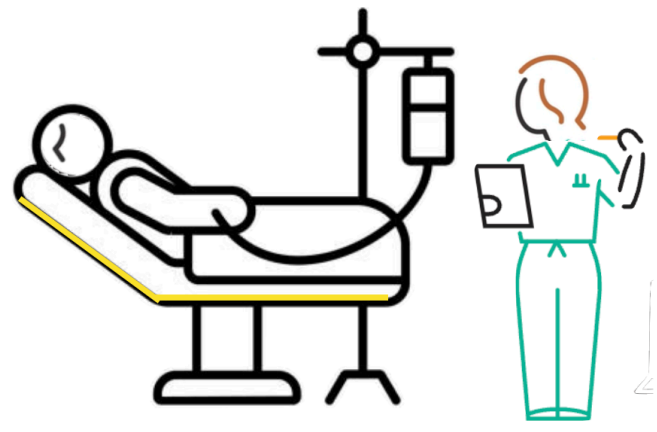


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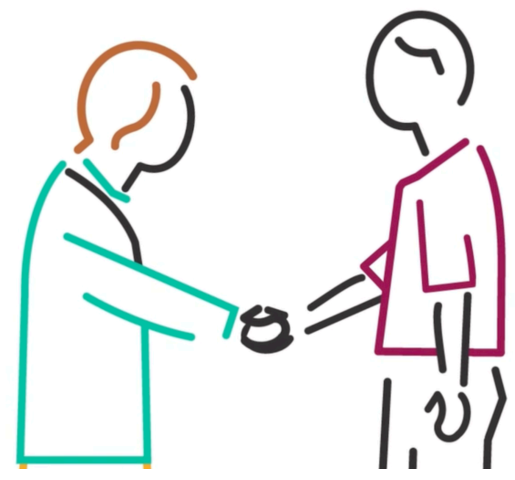


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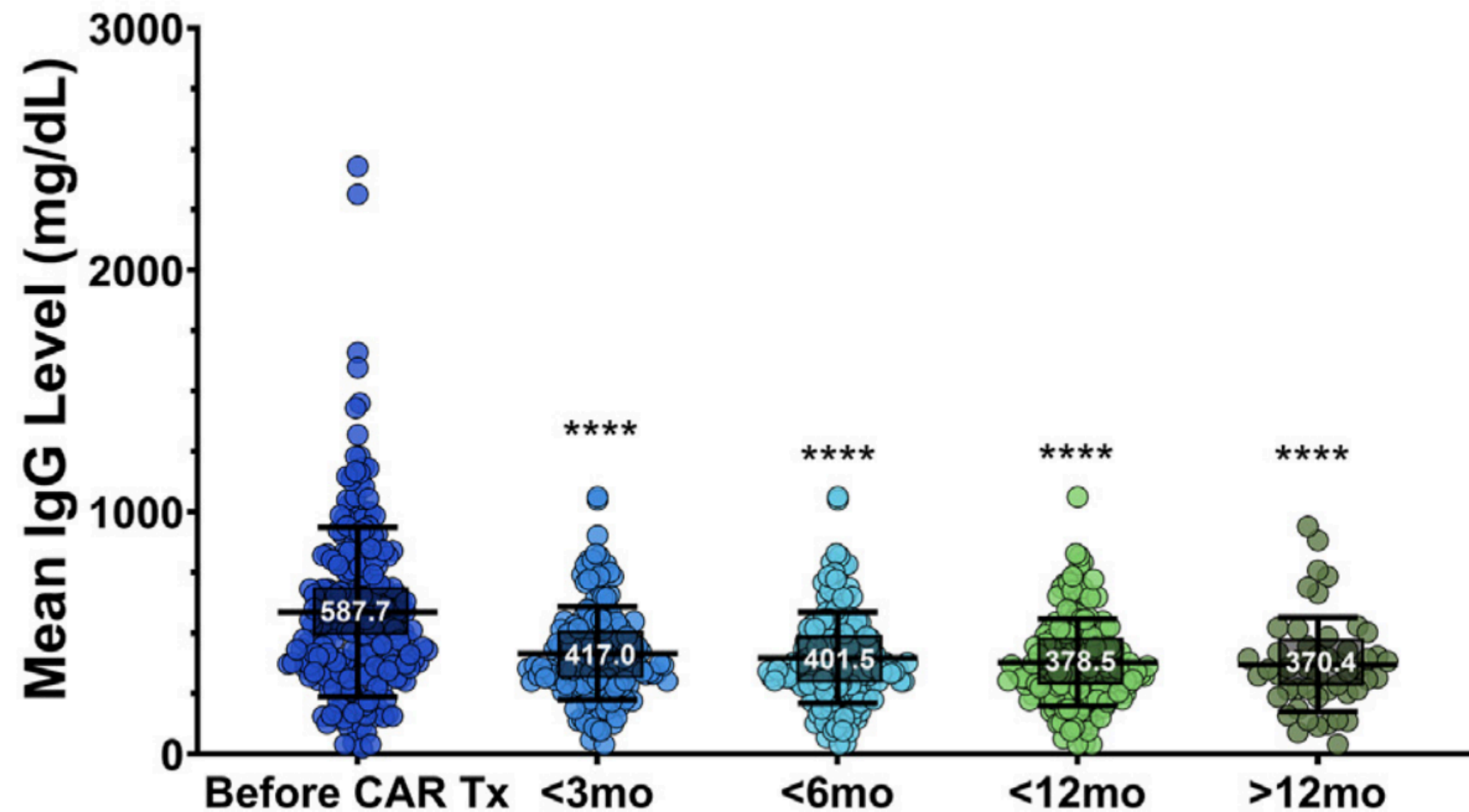
Cuidados tempranos (0 - 30d) y seguimiento (>30d)



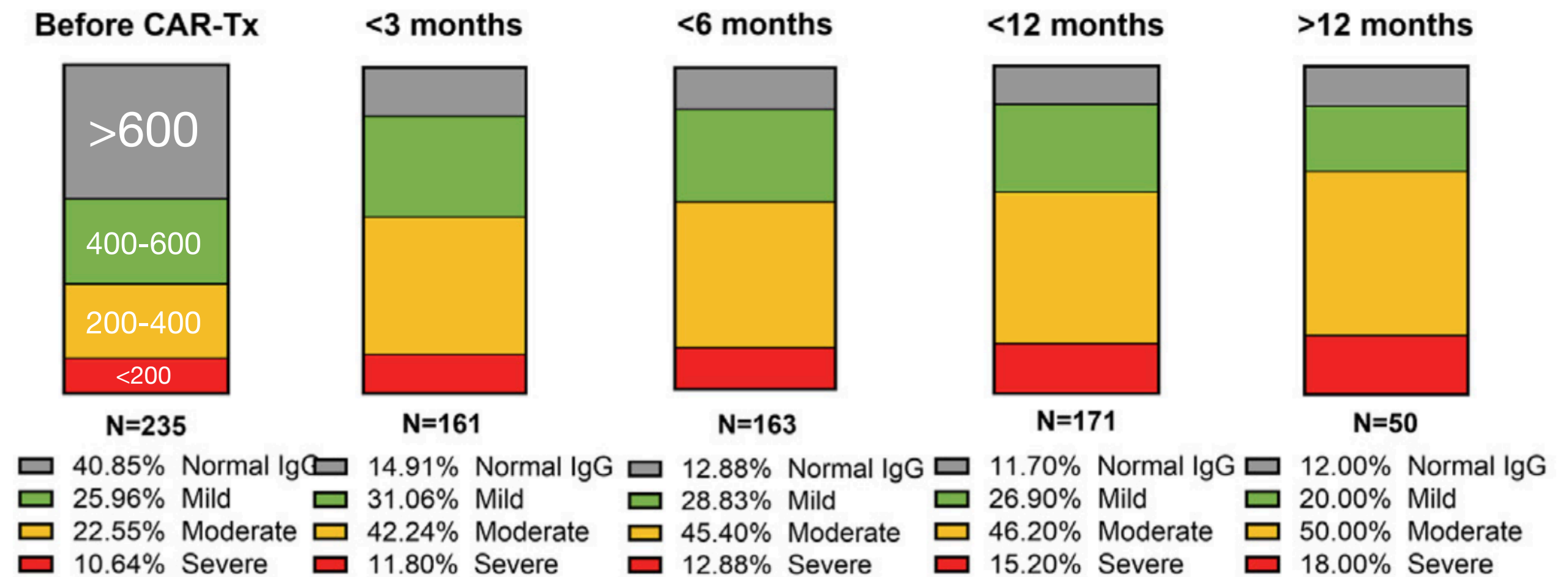
Reconstitución inmune & infecciones

A

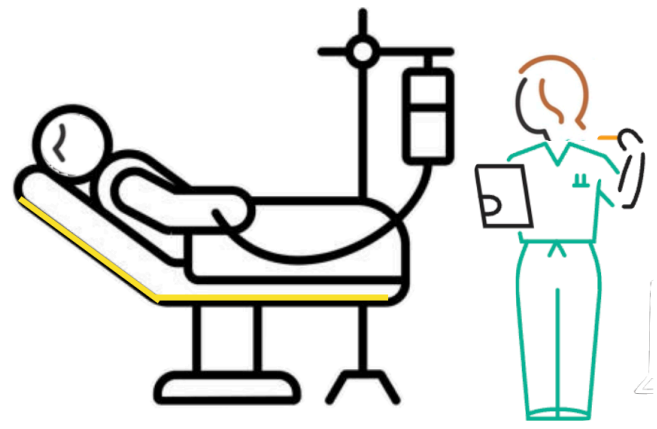
IgG Levels after CAR-Tx



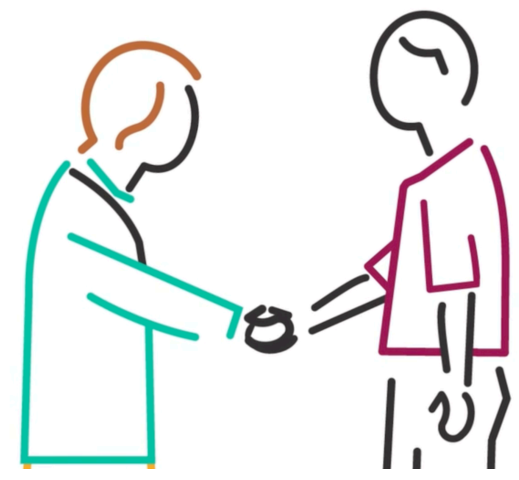
B



59% con IgG baja previo a CAR-T



Cuidados tempranos (0 - 30d) y seguimiento (>30d)



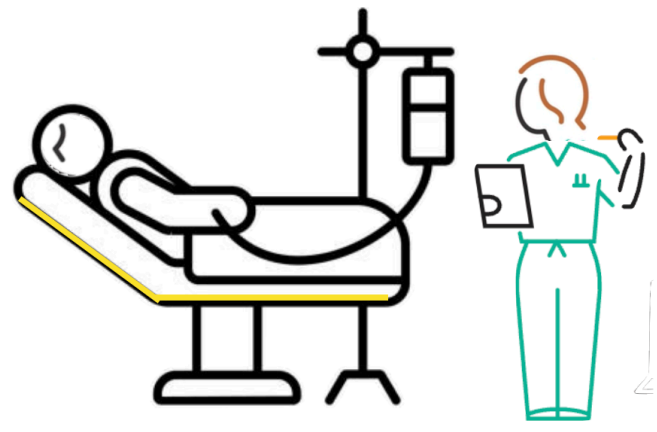
Reconstitución inmune & infecciones

41% con IgG normal previo a CAR-T

	Before CAR-Tx	<3mo	<6mo	<12mo	>12mo
N	95	44	45	47	15
Hypogammaglobulinemia, n (%)	-	24 (54.6)	28 (62.2)	31 (66.0)	12 (80.0)
Mild, n (%)	-	19 (43.2)	19 (42.2)	17 (36.2)	5 (33.3)
Moderate, n (%)	-	4 (9.1)	8 (17.8)	11 (23.4)	3 (20.0)
Severe, n (%)	-	1 (2.3)	1 (2.2)	3 (6.4)	4 (26.7)
Mean IgG (mg/dL)	907.8 (311.8)	601.4 (191.9)	573.4 (191.7)	519.3 (202.4)	410.5 (225.2)
p value of mean IgG compared to mean IgG before CAR-Tx	-	p<0.0001	p<0.0001	p<0.0001	p=0.0006
95% CI		201.8 - 442.4	227.1 - 460.3	281.4 - 509.7	276.3 - 805.7

46,7% <400

Supplemental Table 2. Development of hypogammaglobulinemia in patients with a normal IgG level prior to CAR-Tx. Hypogammaglobulinemia was defined by $IgG \leq 600$ mg/dL and stratified by severity using mild ($400 \text{ mg/dL} < IgG \leq 600 \text{ mg/dL}$), moderate ($200 \text{ mg/dL} < IgG \leq 400 \text{ mg/dL}$), and severe ($IgG \leq 200 \text{ mg/dL}$). n (%), P value = $\alpha < 0.05$.



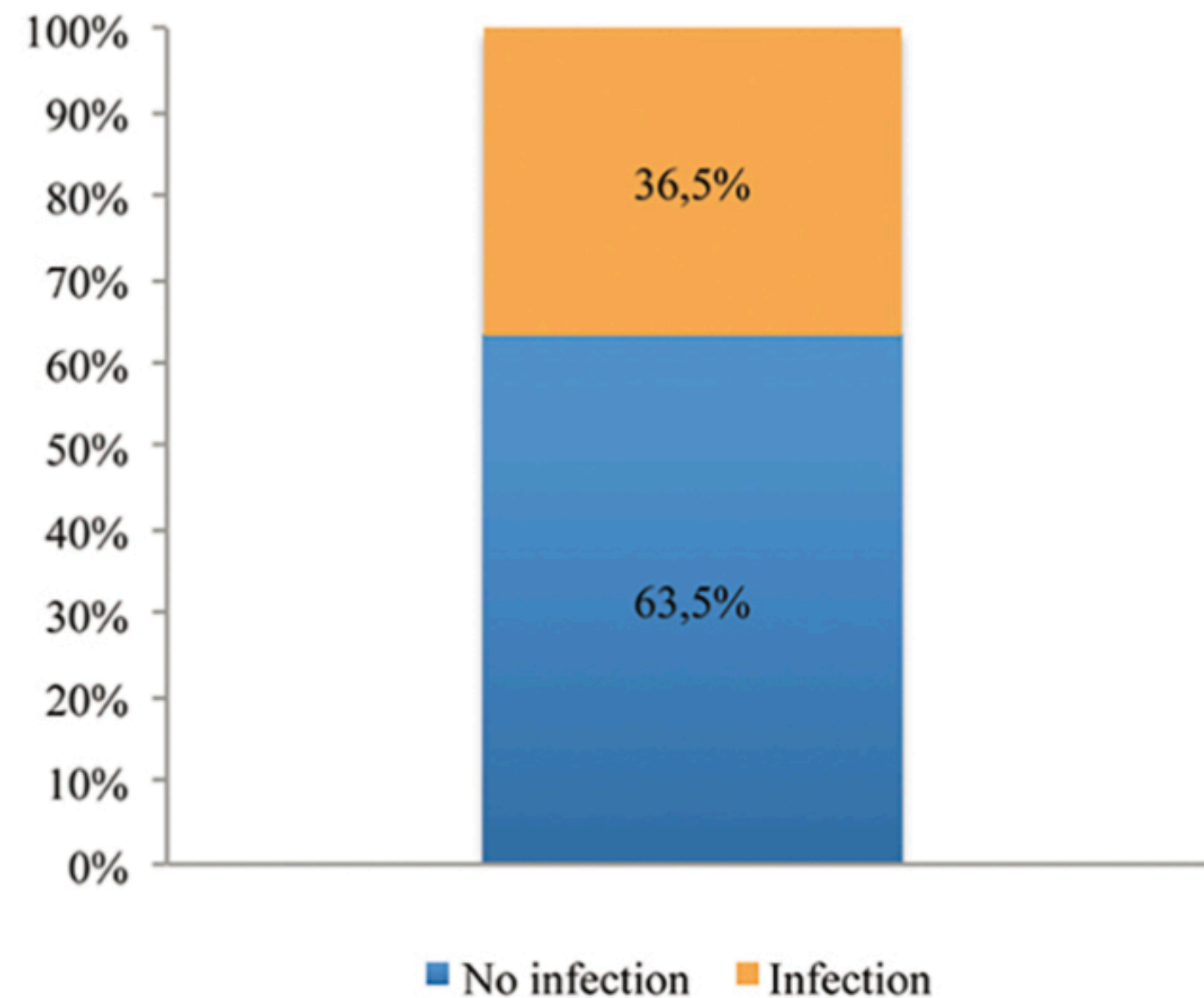
Cuidados tempranos (0 - 30d) y seguimiento (>30d)



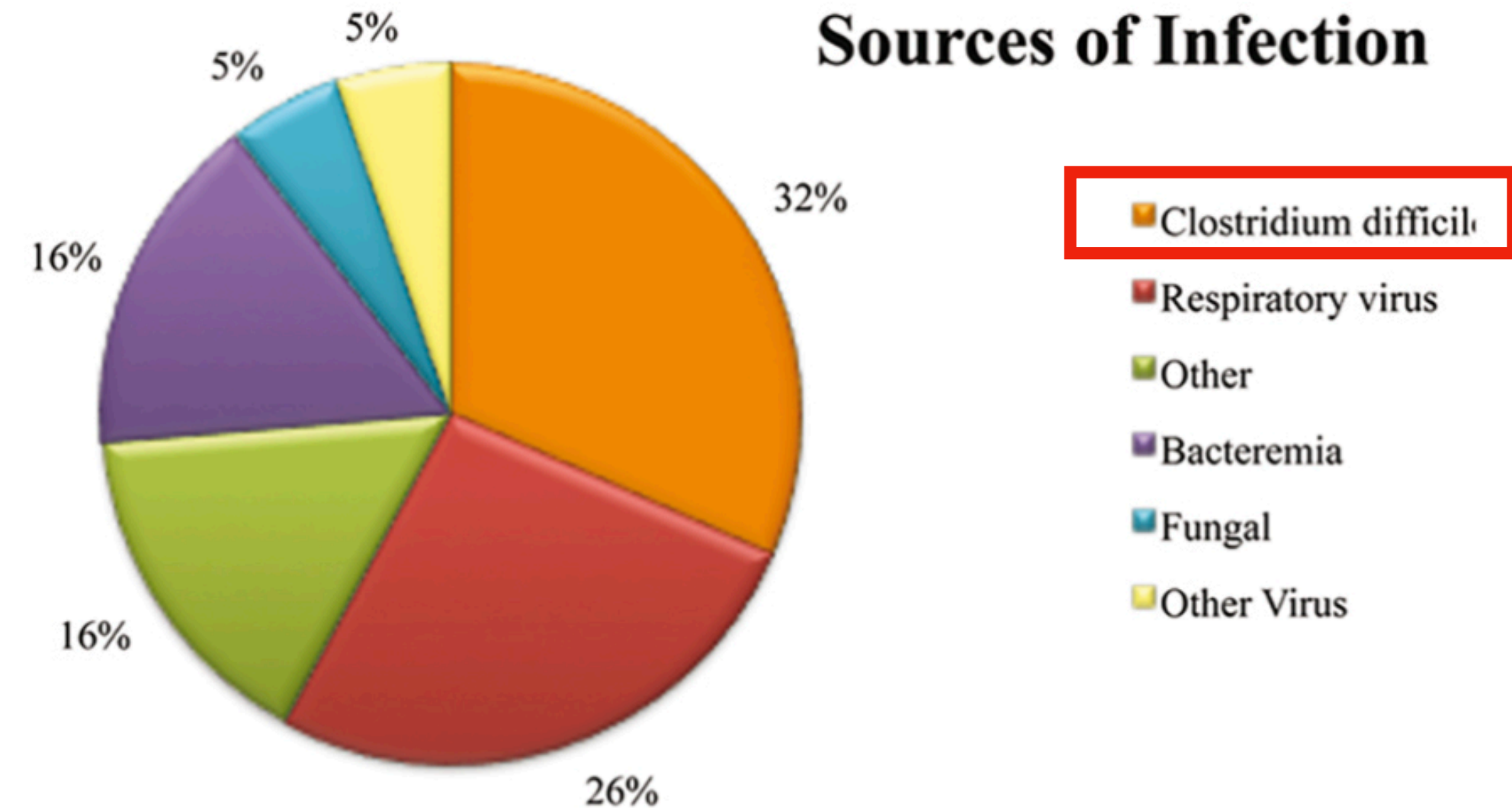
Reconstitución inmune & infecciones

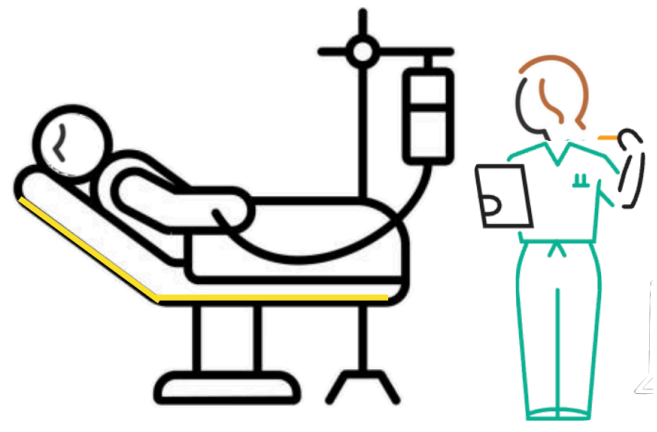
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Patients with Infections Within 30 Days of CAR T Infusion

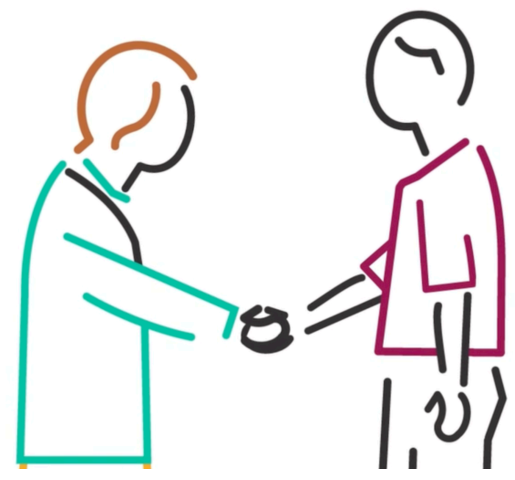


Sources of Infection





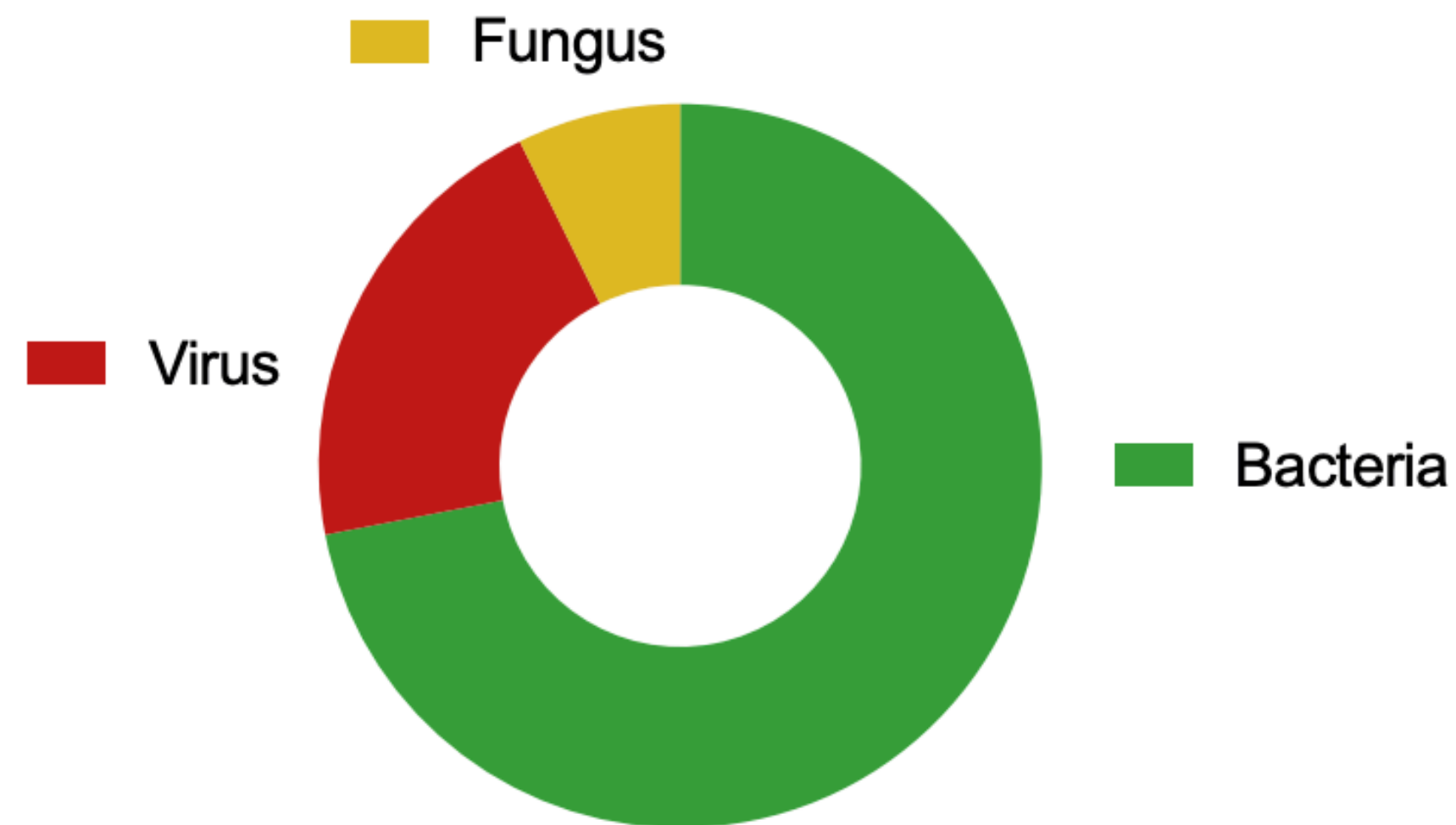
Cuidados tempranos (0 - 30d) y seguimiento (>30d)



Infecciones

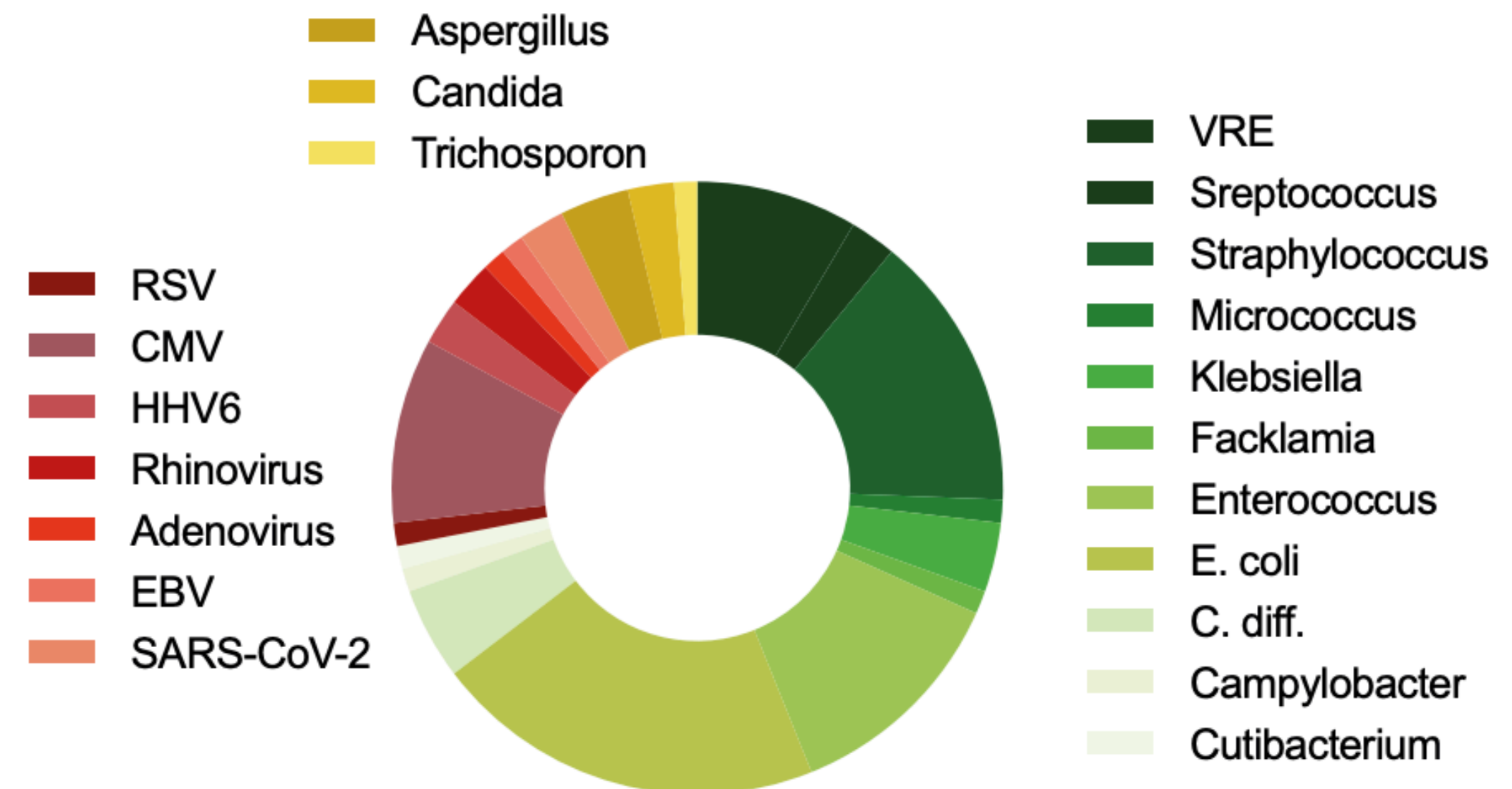
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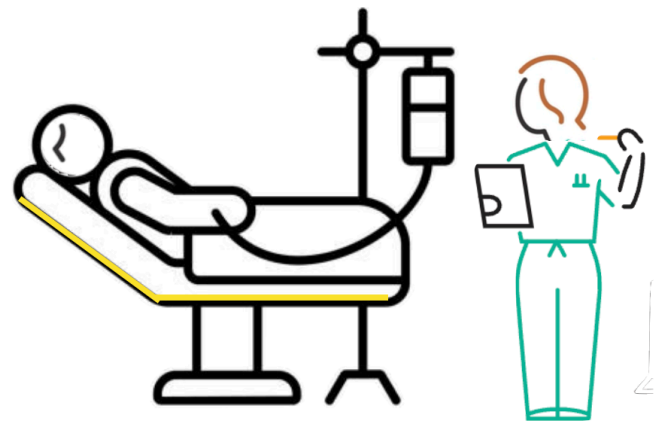
Class of microbiological evidence



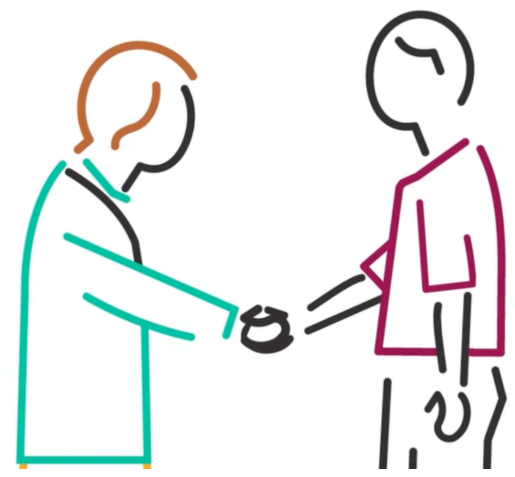
C

Identification of pathogen

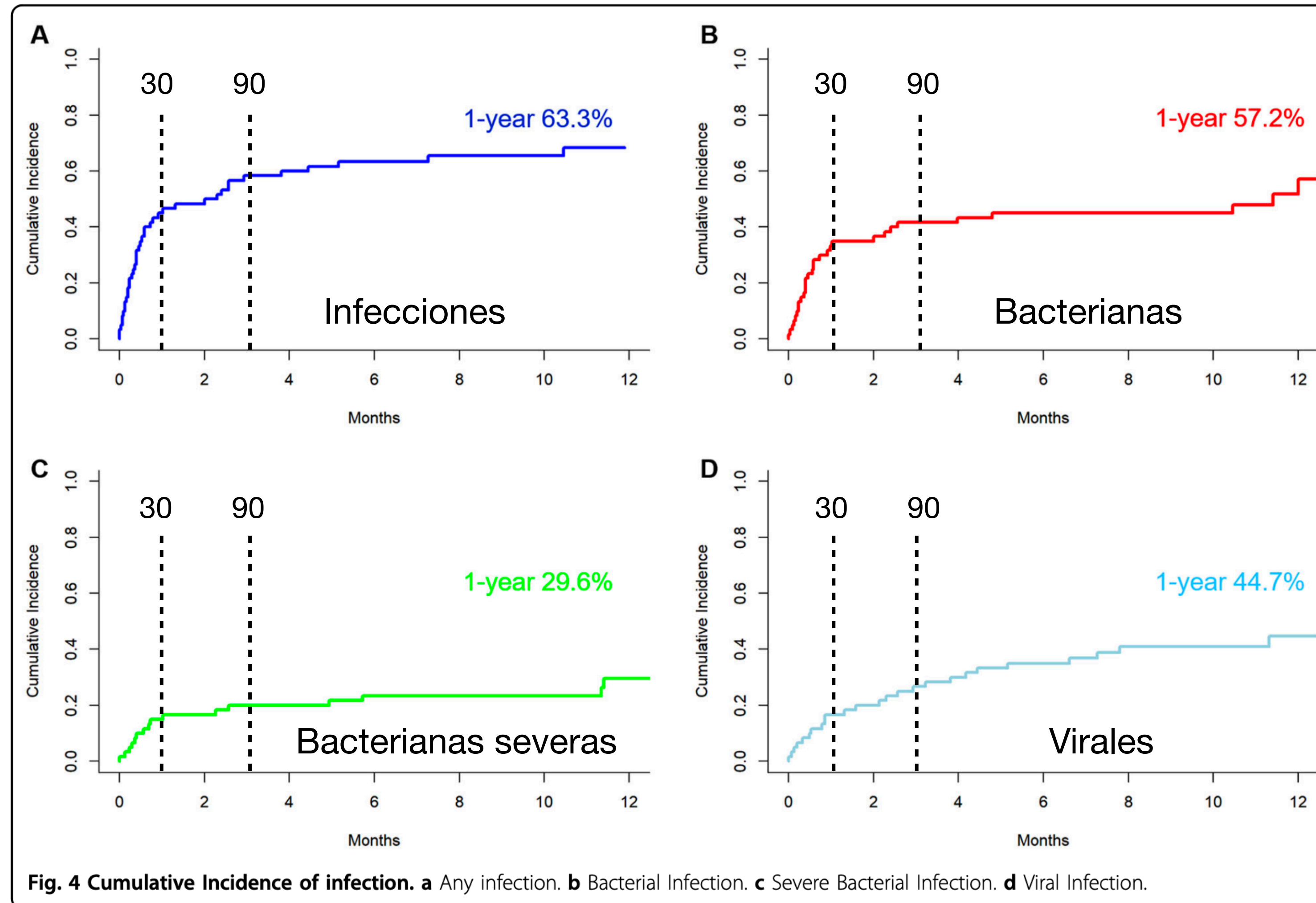


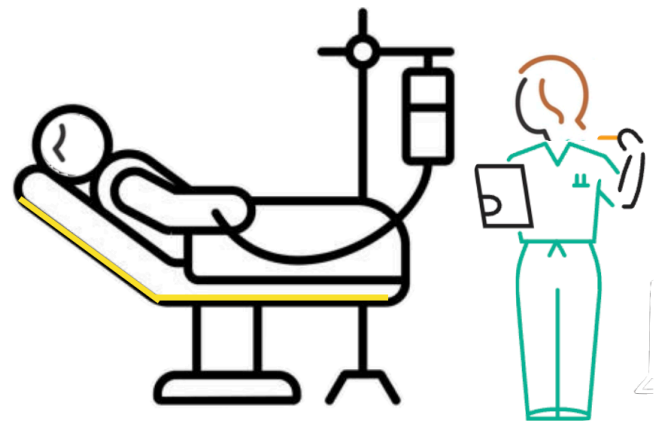


Cuidados tempranos (0 - 30d) y seguimiento (>30d)

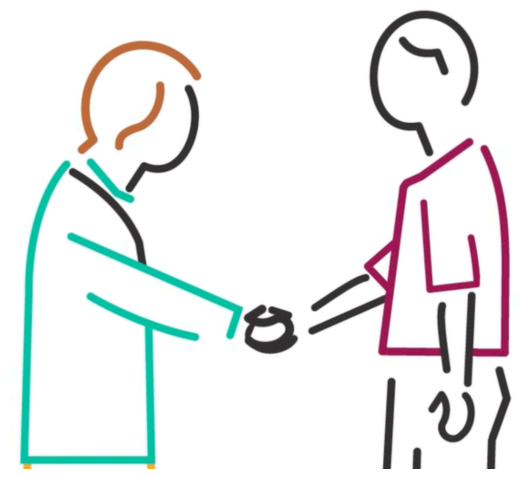


Infecciones





Cuidados tempranos (0 - 30d) y seguimiento (>30d)



Infecciones

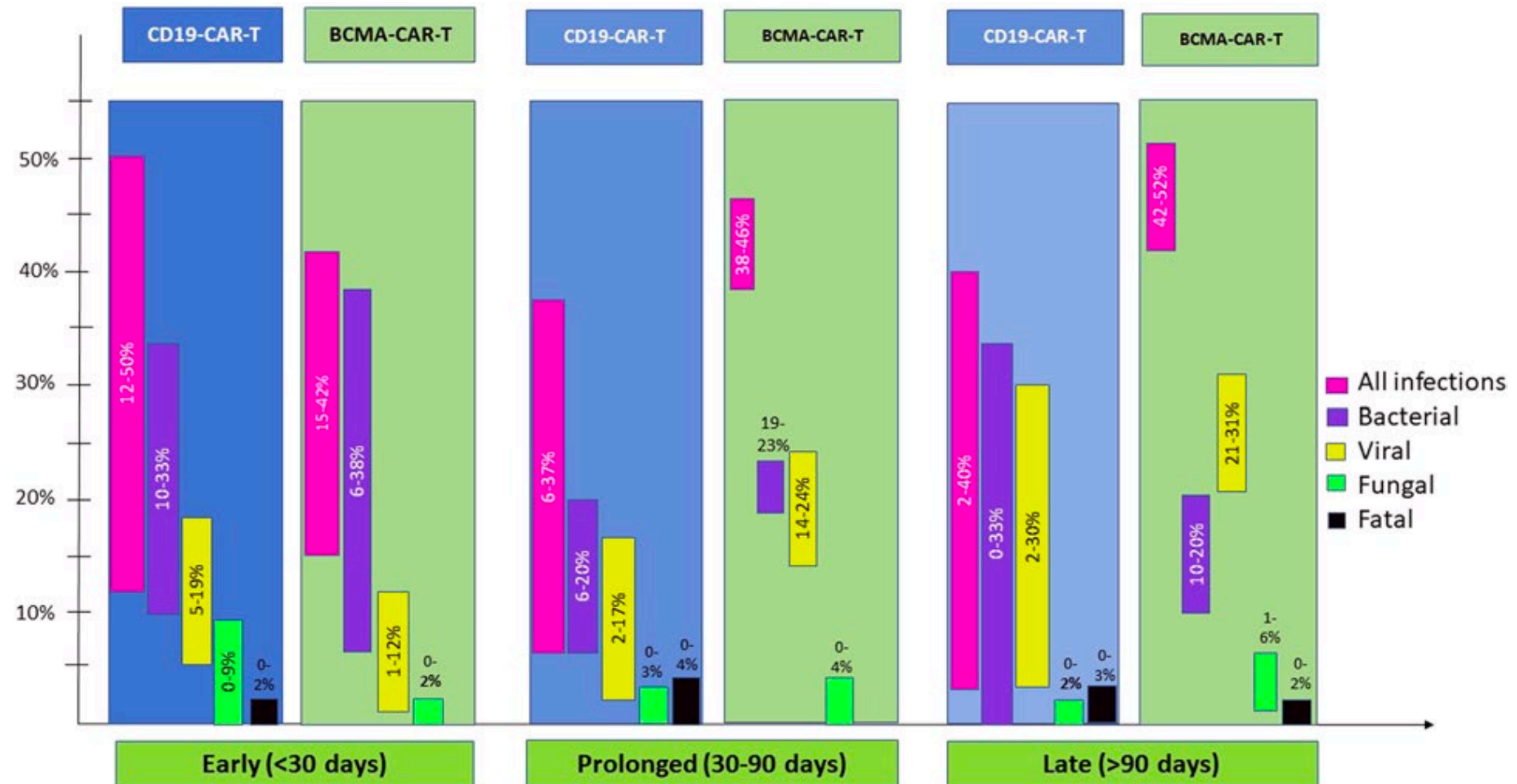
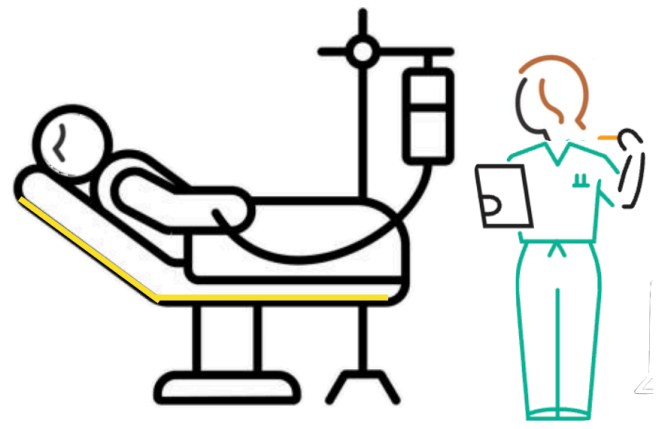
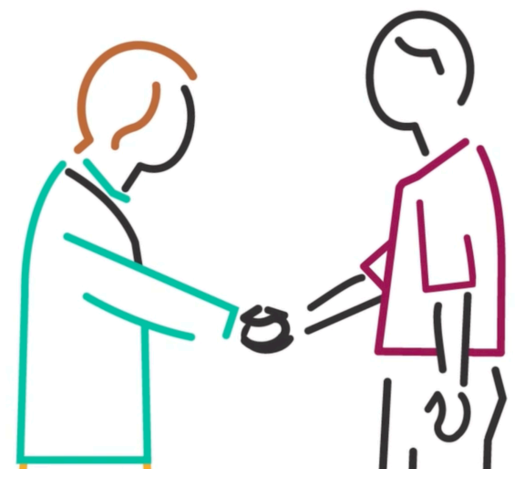


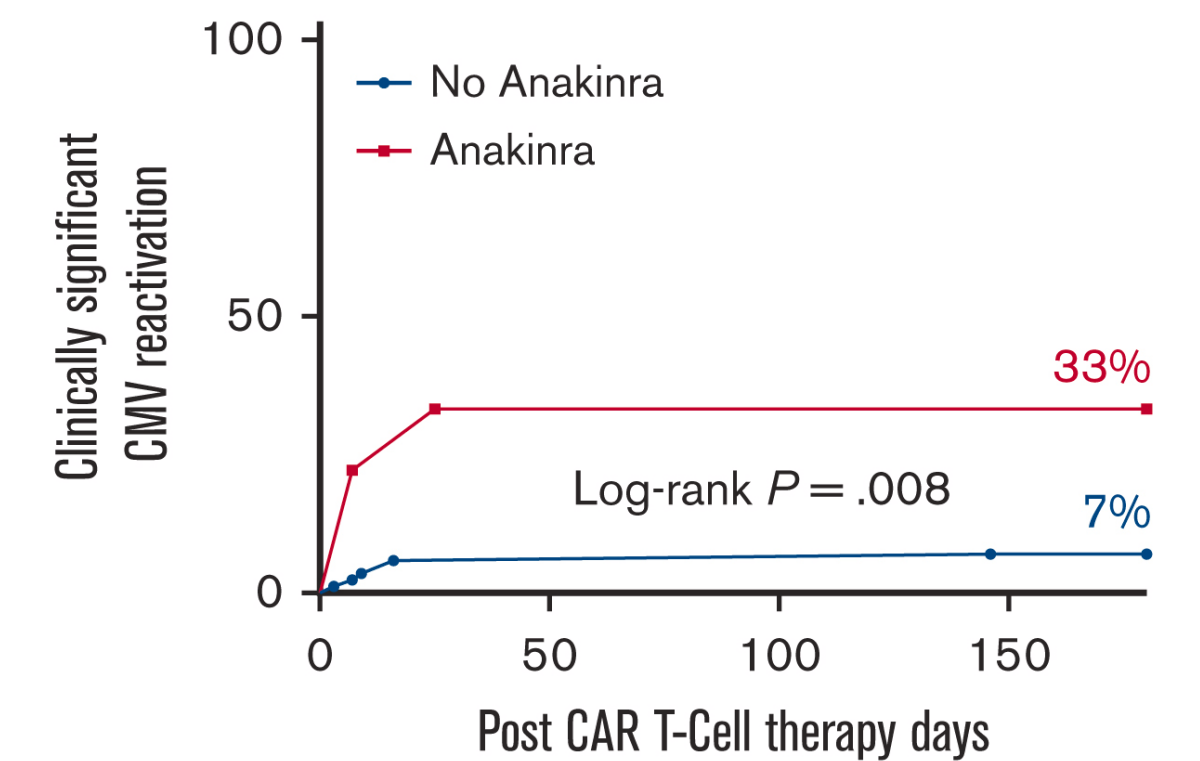
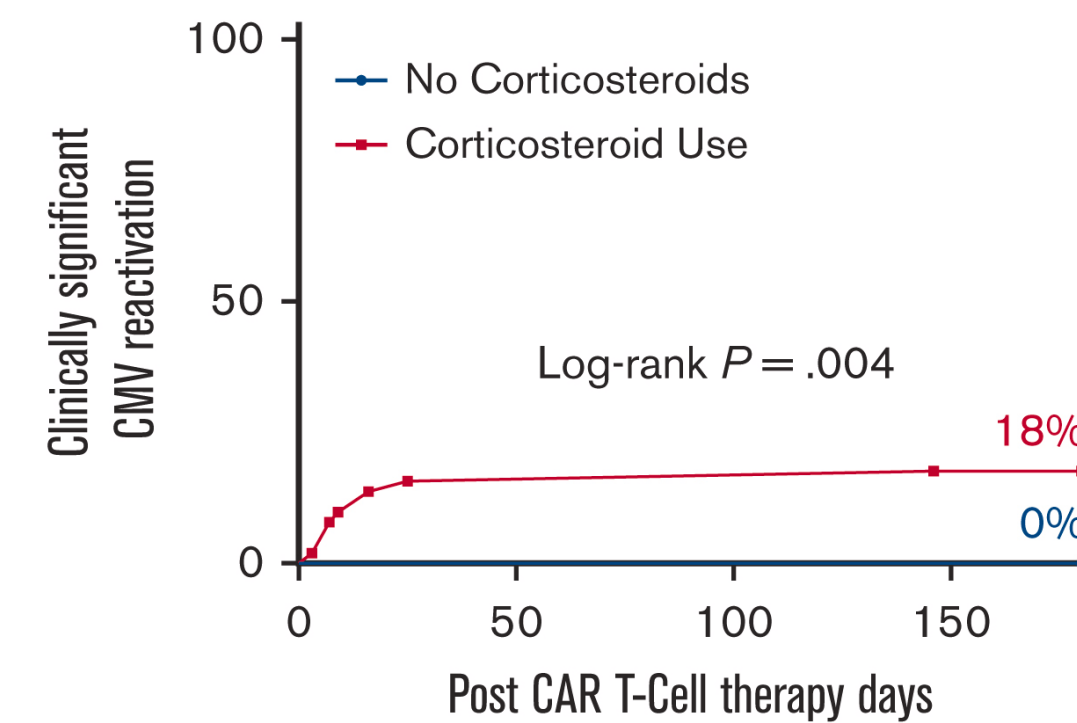
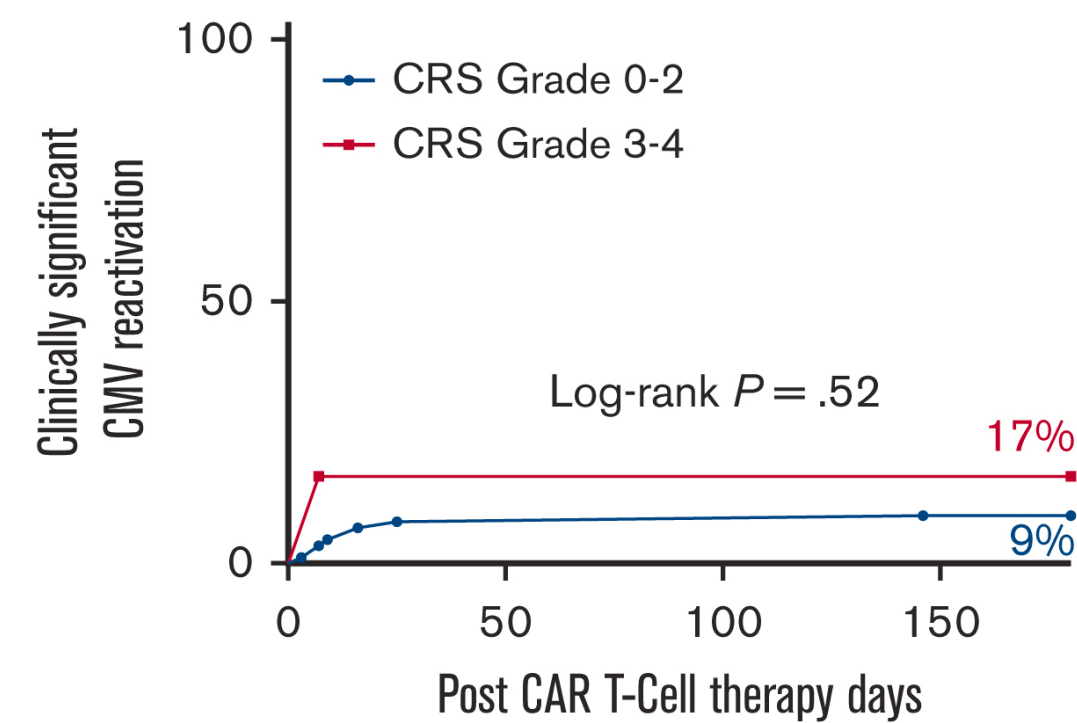
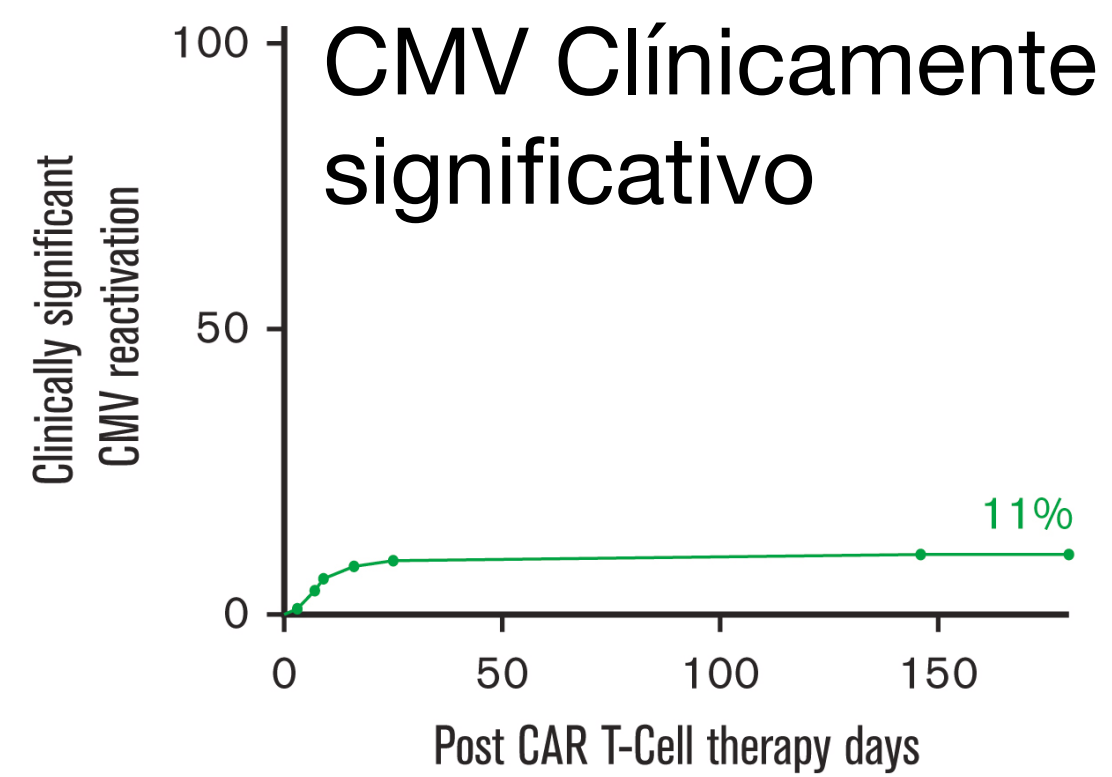
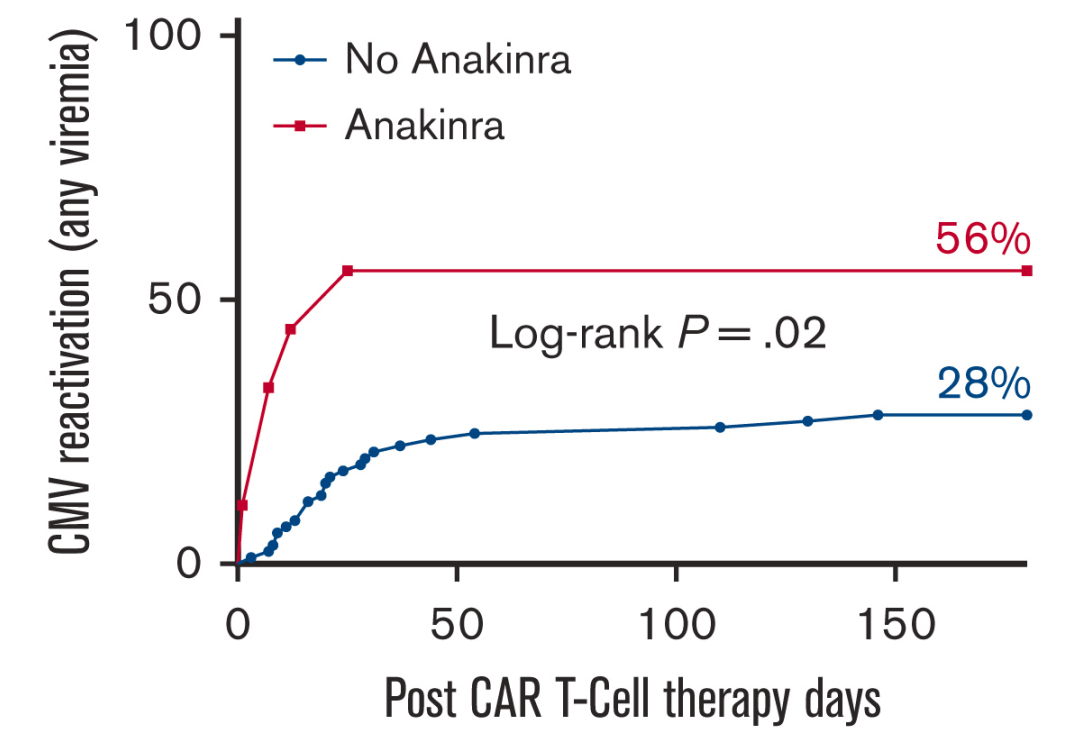
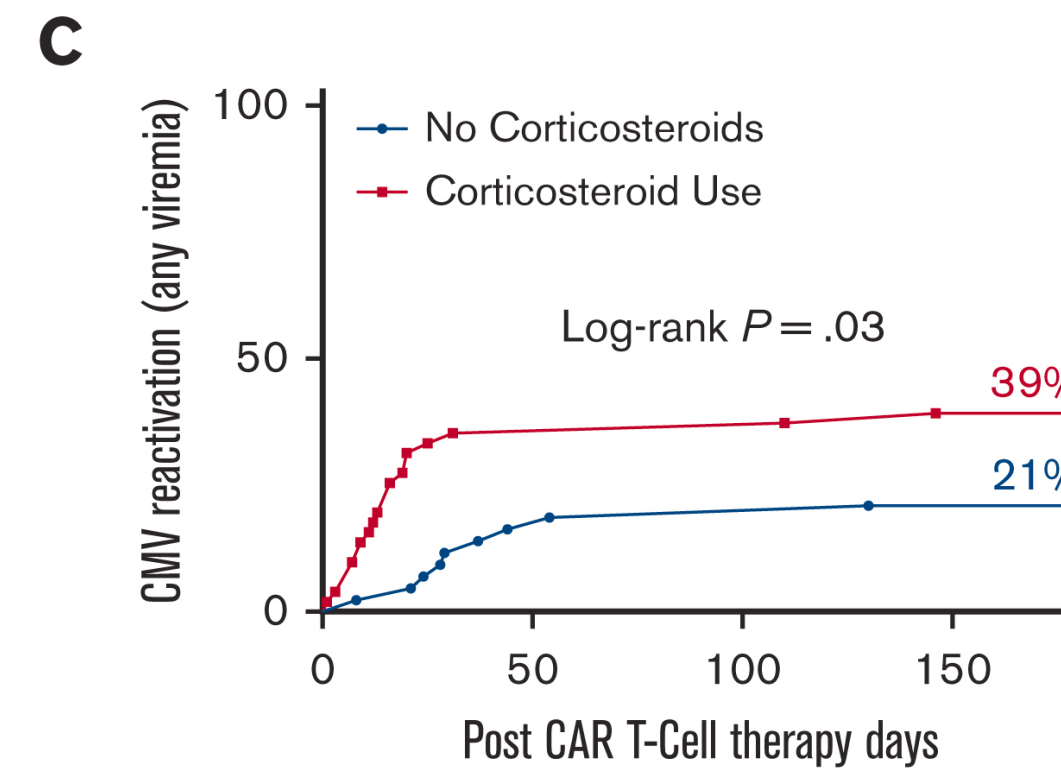
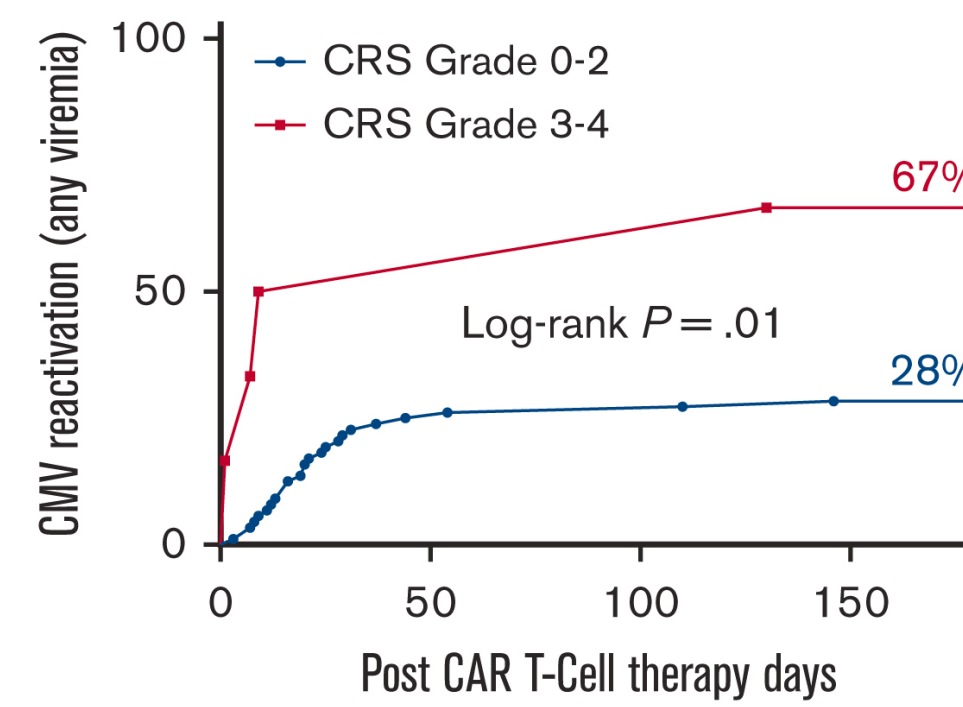
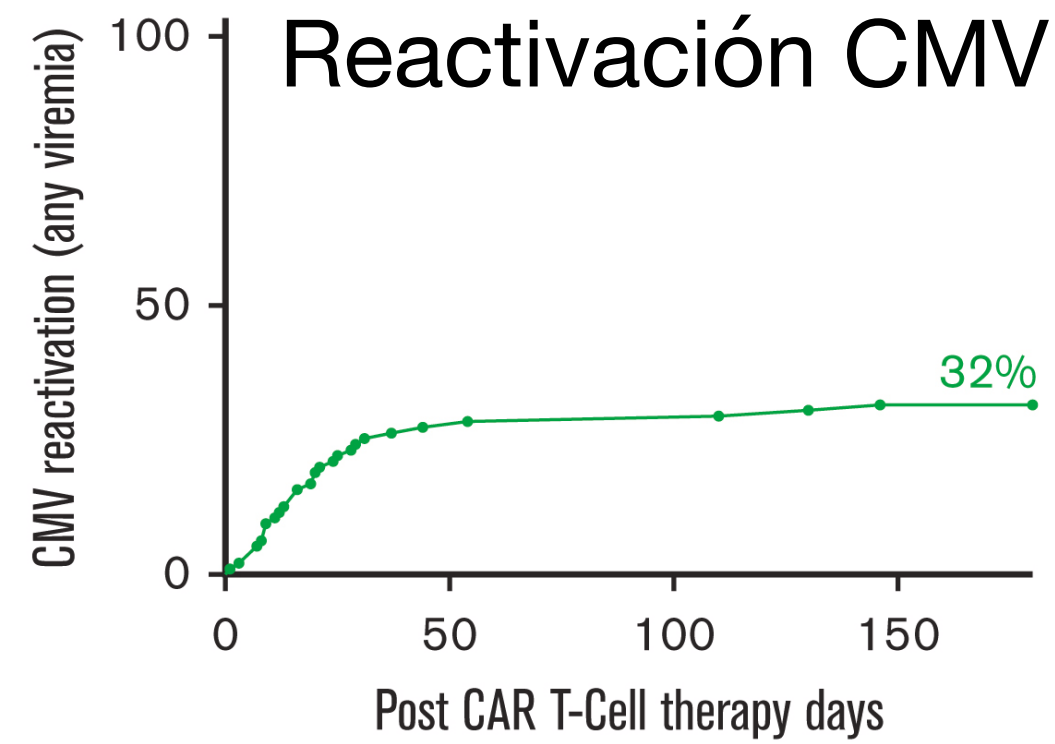
Figure 2. Estimated range of % of patients who develop infections over time with CD19-directed and BCMA-directed CAR T-cells (recognizing variations in reporting and criteria used) derived from refs. ^{6,7,10-13,30,32,40} *Data in BCMA-CAR-T recipients are limited.

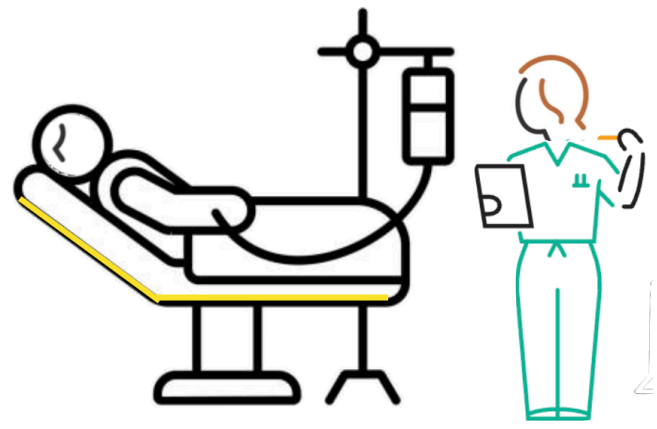


Cuidados tempranos (0 - 30d) y seguimiento (>30d)

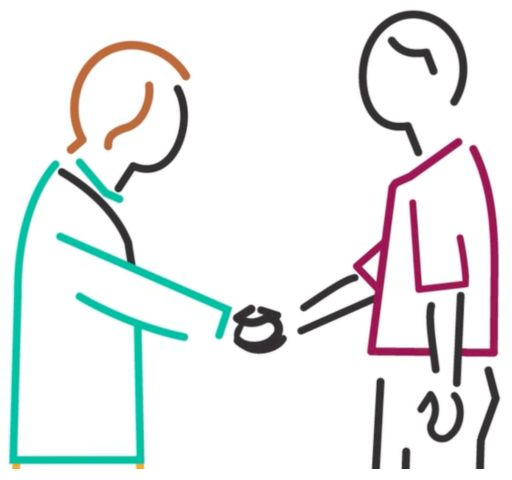


Infecciones





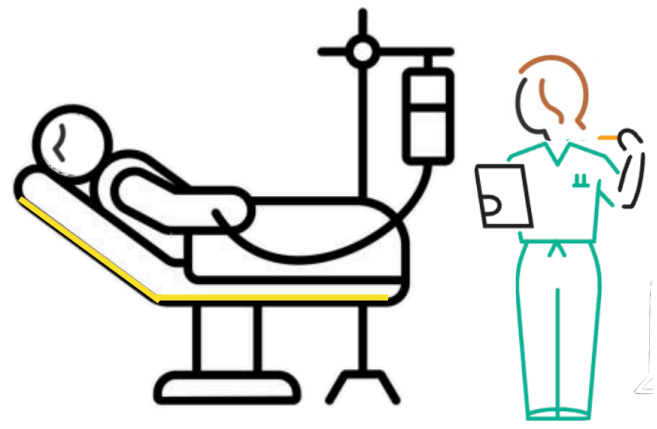
Cuidados tempranos (0 - 30d) y seguimiento (>30d)



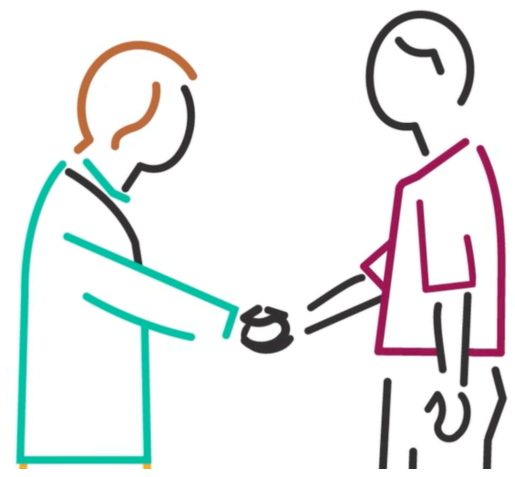
Infecciones

Recomendaciones generales (de experto*):

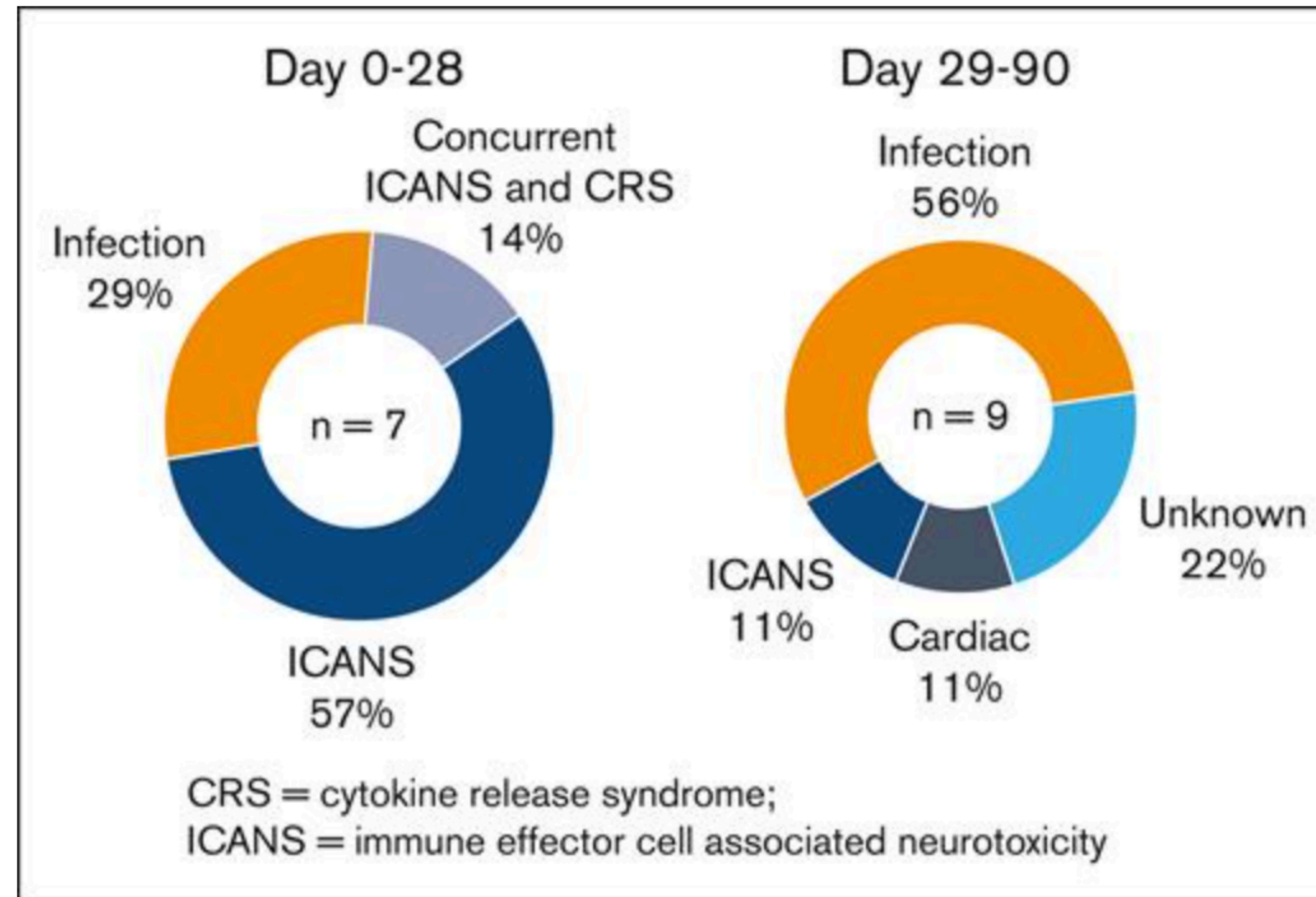
- Aciclovir / valaciclovir hasta 6m post CAR-T o CD4 >200
- TMT/SMX hasta 3 meses de CAR-T o CD4 > 200
- IgIV si IgG <400



Cuidados tempranos (0 - 30d) y seguimiento (>30d)

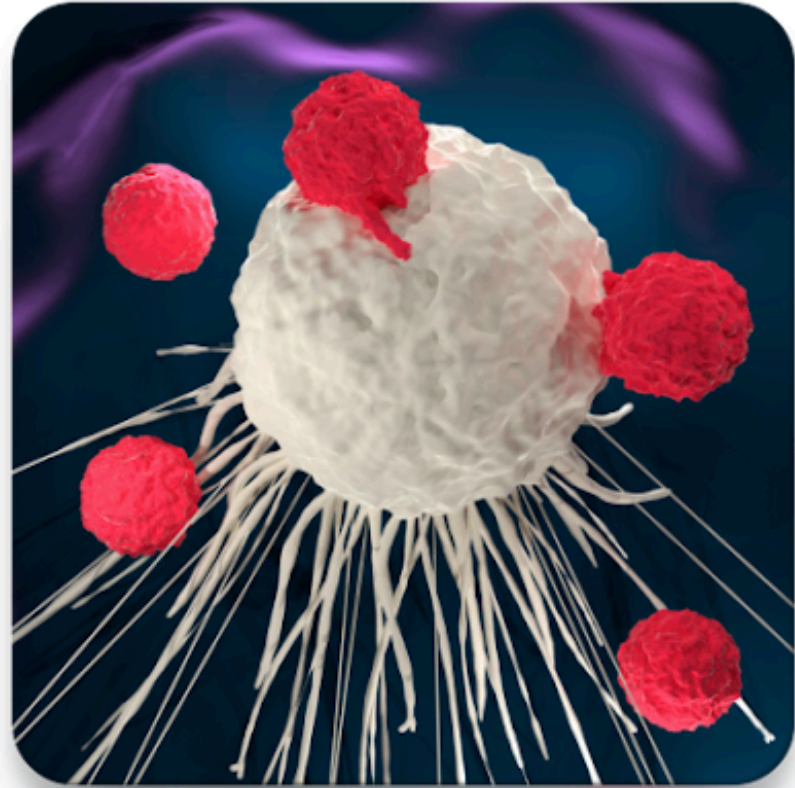


Muertes



CARTOX

- Google play
- Appstpre



Toxicity Grading



Toxicity Management



Antimicrobial Prophylaxis



Has the patient **recently** received antipyretics, anti-cytokine therapy or steroids? Yes No

Does the patient have any of the following related to Cell Therapy?

Fever
temperature ≥ 38.0 °C Yes No

Hypotension
not attributable to any other cause Yes No

Hypoxia
not attributable to any other cause Yes No

Select one of the following:

Requires low-flow oxygen (Adults: ≤ 6 liters/minute; Pediatrics: ≤ 5 liters/minute) by nasal cannula or blow-by

Requires high-flow oxygen (Adults: > 6 liters/minute; Pediatrics: > 5 liters/minute) by nasal cannula, facemask, non-rebreather mask, or Venturi mask

Requires positive pressure oxygenation (C-PAP, BiPAP) or mechanical ventilation. (Don't select if the sole reason for intubation is for airway protection related to neurotoxicity)

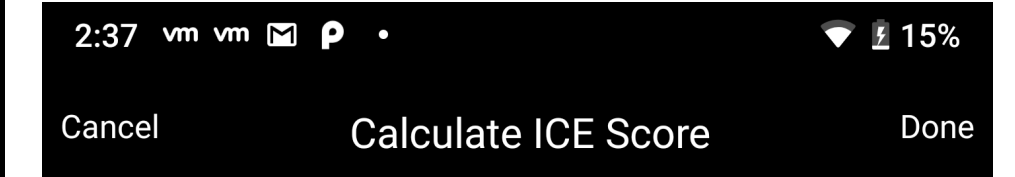
Grade



CRS GRADE

1

View Treatment



ICE Score: 7

Is the patient arousable? Yes No

1 Can the patient state the **year**? Yes No

2 Can the patient state the **month**? Yes No

3 Can the patient state the **city**? Yes No

4 Can the patient state the **hospital**? Yes No

5 Can the patient **follow commands**? Yes No

6 Can the patient write a **standard sentence**? Yes No

7 Of **three objects**, how many can the patient identify correctly? 0 1 2 3

8 Can the patient **count backwards** from 100 by tens? Yes No



Cuidados del paciente en CAR-T

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Abril 2025