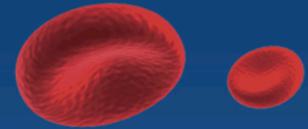


THE 14<sup>TH</sup> INTERNATIONAL  
SYMPOSIUM ON  
**MYELODYSPLASTIC  
SYNDROMES**



**2017**  
MAY 3 - 6  
Valencia, Spain

ADVANCING RESEARCH  
& PATIENT CARE

mds2017



# Azacitidine at home

Hospital Clínico Universitario de Valencia

Servicio de Hematología

Laura Muñoz

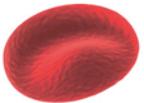
Nurse





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2. Objectives
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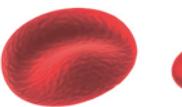
# 1. INTRODUCTION

MDS

A diagram illustrating the definition of MDS. A central orange rounded rectangle contains the text "MDS". Two arrows branch out from the right side of this rectangle. One arrow points upwards and to the right, containing the text "Dysplasia", "Abnormal", "Cytogenetic", and "BM system". The other arrow points downwards and to the right, containing the text "Anemia", "Neutropenia", and "Thrombocytopenia".

Dysplasia  
Abnormal  
Cytogenetic  
BM system

Anemia  
Neutropenia  
Thrombocytopenia

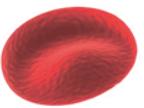


## IPSS-R

Variable	0	0.5	1	1.5	2	3	4
Cytogenetics	V. good	-	Good	-	Int	Poor	V. poor
BM blast%	≤2	-	>2 - <5	-	5-10	>10	-
Hgb	≥10	-	8-10	<8	-	-	-
Platelets	≥100	50-100	<50	-	-	-	-
ANC	≥0.8	<0.8	-	-	-	-	-

Risk Category	Risk Score
Very low	≤ 1.5
Low	>1.5 - 3
Intermediate	>3 – 4.5
High	>4.5 - 6

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	Low-Risk	High-Risk
Objective	Control symptoms	Delay Leukemia transformation
	<b>Improve quality of life &amp; Extend survival</b>	
Treatment	Supportive therapies (WBC's, RBC's and platelets transfusions)	<ul style="list-style-type: none"><li>- Standard chemotherapy</li><li>- BM Transplant → (low % patients)</li><li>- Hypomethylating Agents, Decitabine, <b>AZACITIDINE</b>.</li></ul>



# 5-Azacitidine

## DEFINITION

Hypomethylating agent that block the methyl compounds, improving normal blood cell development in patients with MDS by allowing the silenced genes to be turned back on

## EVIDENCES

- Improve response rates and time to progression to AML
- Overall survival
- Transfusion independence
- Improvement in quality of life

## ADMINISTRATION & SIDE EFFECTS

- SC or IV injection daily for 5 or 7 days every four weeks.
- Myelosuppression
- Nausea
- Constipation
- Injection site reactions



A close-up photograph of several hands, some belonging to older individuals and others to younger ones, reaching out towards each other. The hands are positioned in the center of the frame, creating a sense of connection and support. The lighting is soft, emphasizing the skin texture and the emotional depth of the scene.

**The advanced age of the majority of the patients together with the difficulty to go to the hospital daily to receive the treatment, have led to the development of this project of Azacitidine at home**



# 2. OBJECTIVES

## Primary

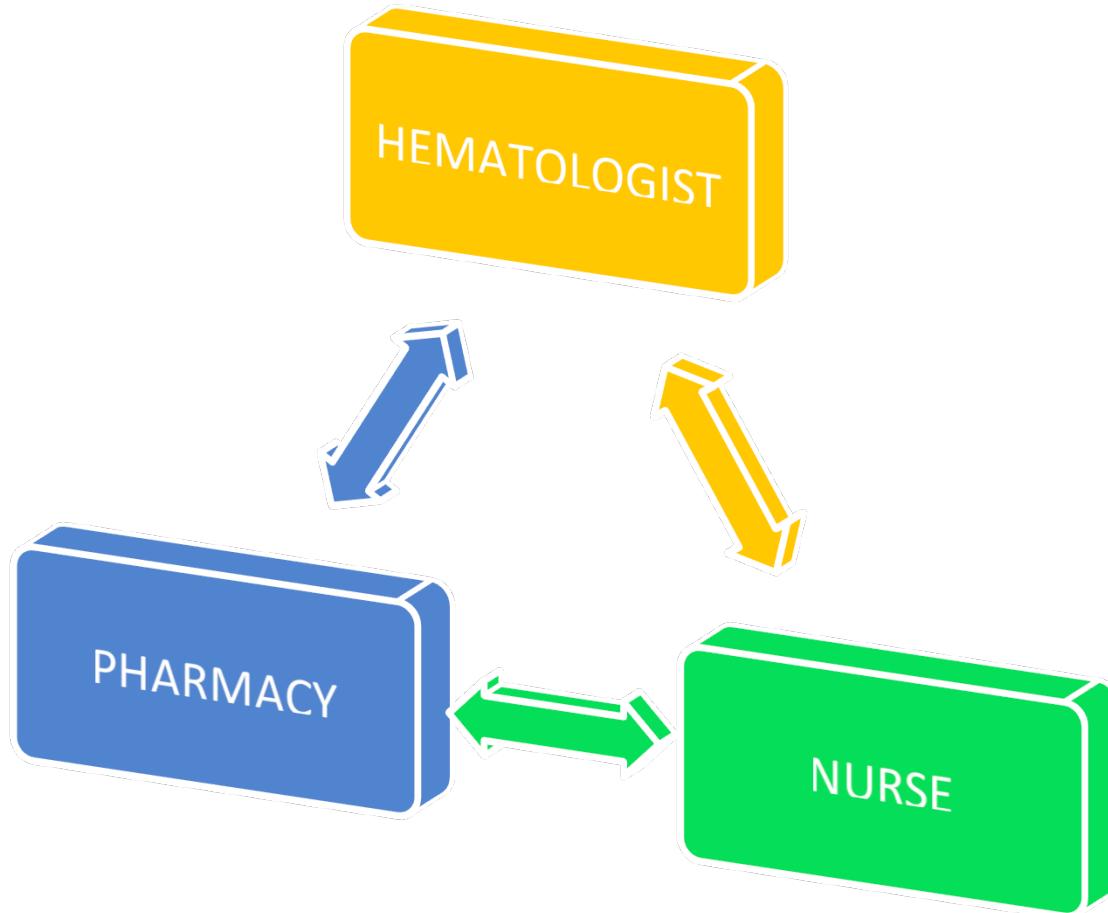
- To administer 5-Azacitidine treatment at the patient's home by a nurse from the Home Care Unit.

## Secondary

- Avoid transferring the patient to the hospital for at least 7 days a month for treatment administration.
- Avoid relatives or social support staff from accompanying the patient for at least 7 days a month for treatment administration.
- Ensure a correct and continuous administration of the medication (adherence to treatment)
- To facilitate the logistics of the day care , by reducing the number of patients that go to the administration of treatments (direct cost savings).
- Improve the patient's quality of life.

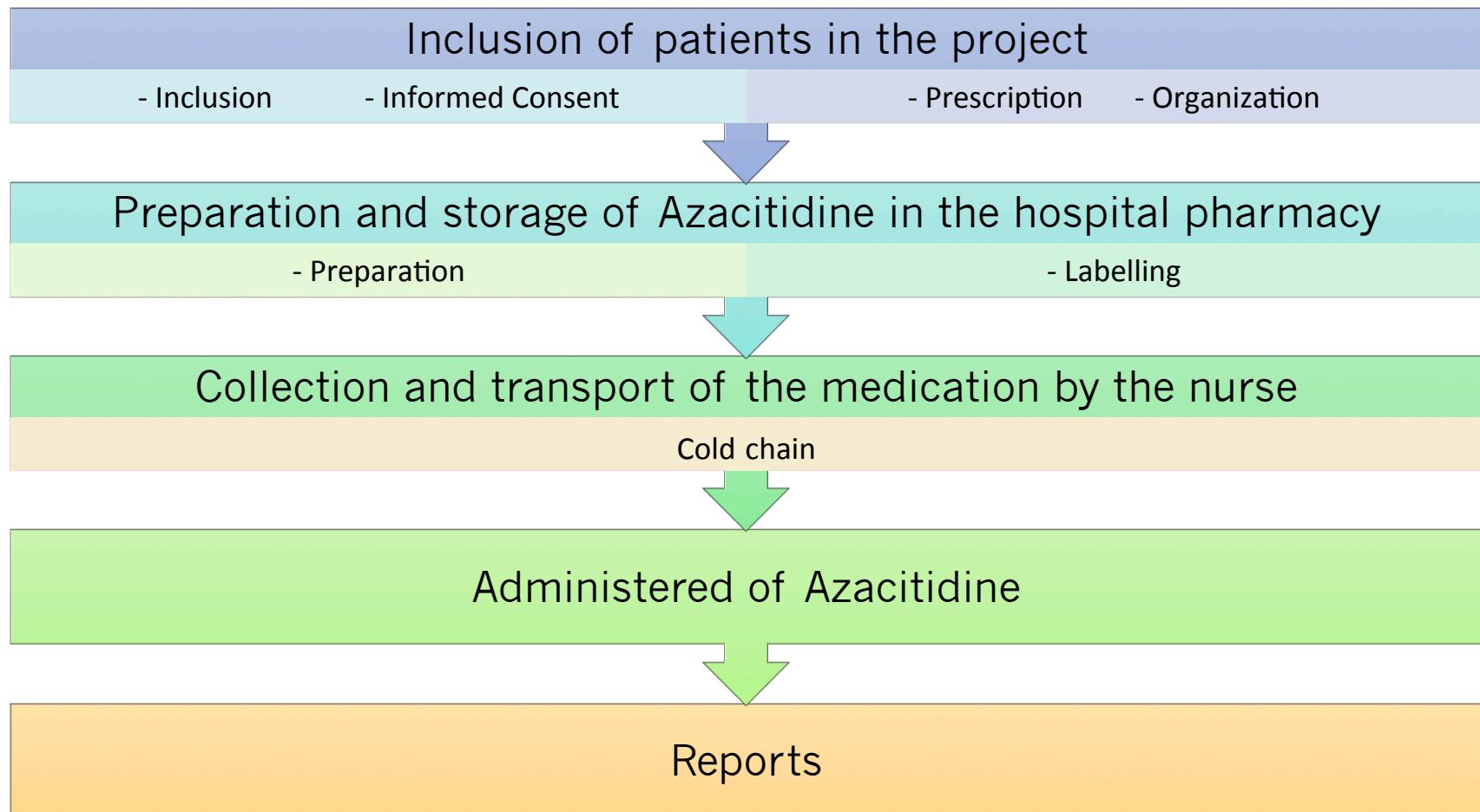


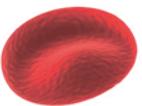
### 3. COMMITMENTS OF PARTICIPATING PARTIES





## 4. PROTOCOL FOR THE IMPLEMENTATION OF THE PROJECT





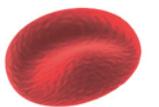
## 5. LEVEL OF IMPLEMENTATION

Approval of the project by the Medical Department, Hematology Service, Pharmacy Service and Home Hospitalization Unit.

Training & Formative sessions

Program of administration of chemotherapy

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**20 ACTIVE HOSPITALS & 119 INCLUDED  
PATIENTS**



# 6. COST & SATISFACTION EVALUATION

## Objectives

- Direct & Indirect Costs
- Total costs: Home Vs Hospital administration
- Level of satisfaction of the patient

## Methodology

I

- Sociodemographic variables (patient and caregiver) and home management.
- N= 20 patients
- Satisfactory Survey: objectives, Advantages in their daily lives, Organizational structure and Global satisfaction.

## Methodology

II

- Direct cost associated with home delivery (Chart 1)
- Direct cost associated with day hospital administration (Chart 1)
- Indirect cost associated with home administration



### Chart 1. Unit costs of resource usage (2017)

Day hospital care	297,53 €/day <sup>(1)</sup>
Unassisted ambulance, urban service	23,37 €/travel expenses <sup>(2)</sup>
Unassisted ambulance, interurban service	37,59 €/travel expenses <sup>(2)</sup>
Hourly rate (Valencia)	13,82 €/hour <sup>(3)</sup>
Home care Primary Care doctor	48,43 €/visit <sup>(1)</sup>
Home care nurse	28,21 €/visit <sup>(1)</sup>
Hematologist consultation	110,12 €/visit <sup>(4)</sup>
Primary care medical consultation	41,69 €/visit <sup>(1)</sup>
Urgency, non specific	132,44 €/visit <sup>(1)</sup>
Urgency family and community medicine	109,68 €/visit <sup>(1)</sup>
Home care	102,02 €/day <sup>(5)</sup>

1-Presidencia de la Generalitat. (2008). Ley 16/2008 de 22 de diciembre. Diari Oficial de la Generalitat Valenciana nº 5922.

2-Servei de salut de les Illes Balears (2014) Resolució del director general del Servei de Salut de modificació de l'annex I de l'Ordre de la Conselleria de Salut i Consum de 22 de desembre de 2006. Butlletí Oficial de les Illes Balears nº 89, de l'1 de juliol de 2014.

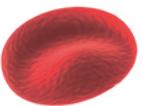
3-<http://www.ine.es/jaxi/Datos.htm?path=/t22/p133/cno11/serie/l0/&file=04001.px>

4-Instituto Nacional de la Salud. (2001). Resultados de la gestión analítica en los hospitales del INSALUD GECLIF 2000. Subdirección General de Coordinación Administrativa, Madrid 2001. (Referido a: Hospitales INSALUD)

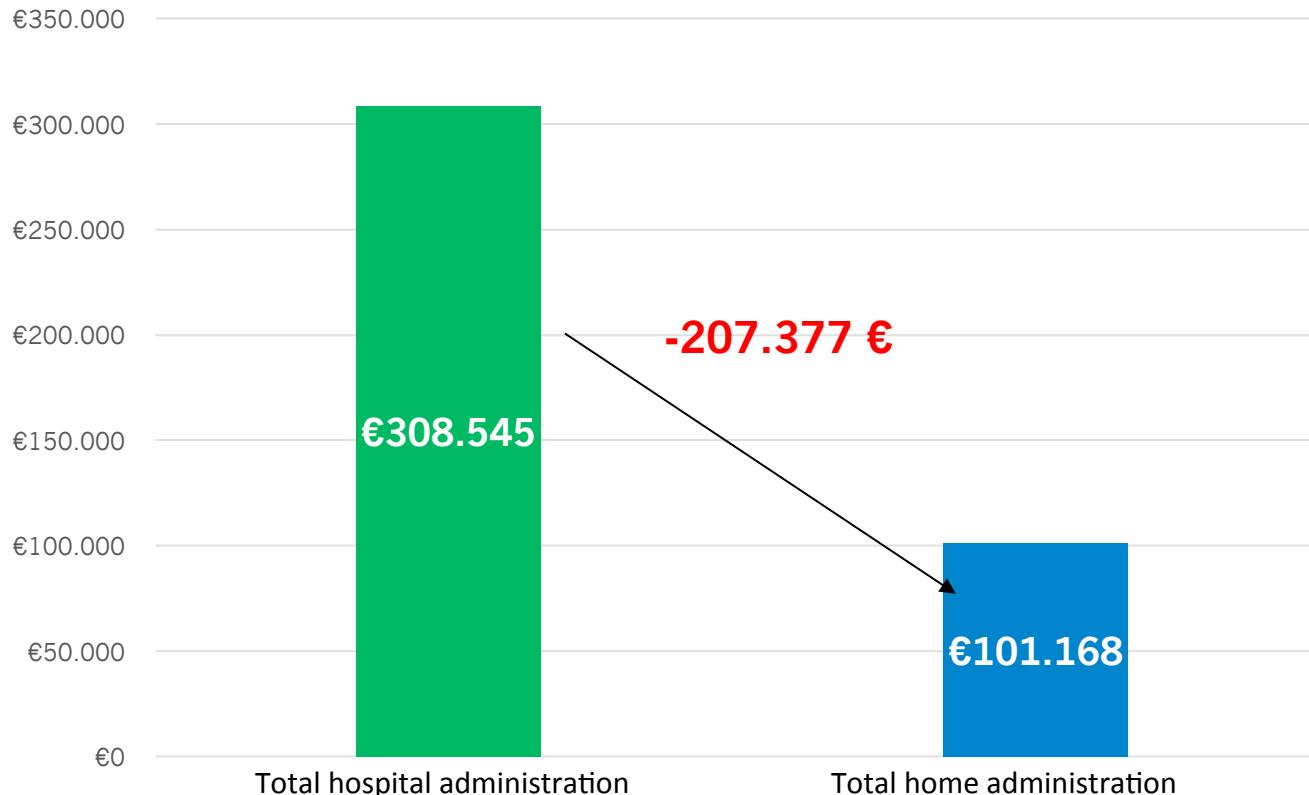


## 7. RESULTS (N=20)

Costes	Hospital Administration	Home Administration
Home administration	0 €	100.919 €
Day Care Unit Administration	297.232 €	0 €
Unscheduled Doctor's Visit (at home)	0 €	48 €
Unscheduled Nurse's Visit (at home)	0 €	28 €
Doctor's Visit	0 €	42 €
Nurse's Visit	0 €	21 €
Specialist Doctor's Visit	0 €	110 €
Caregiver	5.222 €	0 €
Transport	6.090 €	0 €
<b>TOTAL</b>	<b>308.545 €</b>	<b>101.168 €</b>
<b>Average Cost</b>	<b>16.239€/patient &amp; 2.165€/cycle</b>	<b>5.325€/patient &amp; 710€/cycle</b>



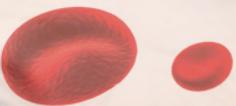
### Economic Analysis Home Administration Vs. Hospital Administration



**Total savings National Health System (NHS) : 207.377€**

**Average savings: 10.915€/patient & 1.455€/cycle** during the study period

Chart 2. Satisfaction Survey– n (%)		5	4	3	2	1	0
Objectives	I'm sure I receive the treatment correctly without leaving my house	9 (100%)					
	My family support system avoids trips to the hospital	8 (89%)	1 (11%)				
	The hospital visits are reduced	9 (100%)					
Advantages in their daily lives	I'm feel better, calmer and safer with this service.	9 (100%)					
	My social life is more active.	4 (44%)	2 (22%)	2 (22%)	1 (11%)		
	Has meant a benefit for my family	9 (100%)					
	Has meant a economic benefit	7 (78%)		1 (11%)			1 (11%)
Organizational Structure	Visit schedule and length	8 (89%)	1 (11%)				
	Communication with healthcare professionals in the event of incidences	9 (100%)					
	Personnel rotation	9 (100%)					
Global Satisfaction	I would recommend this service	9 (100%)					



# Satisfaction Survey

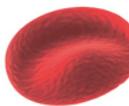
- Of the 19 patients who followed home treatment with azacitidine, 9 answered to the satisfaction survey.
- All patients would rather receive azacitidine at home than at the hospital.
- Patients feel confident during the home administration of azacitidine and would recommend this program to others in the same situation (Chart 2).



# 8. SUMMARY

- VIDEO

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THANK YOU!

A black and white photograph showing several hands of different ages and skin tones clasped together, symbolizing support and unity.

Fundación Investigación Clínico de Valencia  
Instituto de Investigación Sanitaria – INCLIVA



DEPARTAMENT DE SALUT DE VALÈNCIA  
CLÍNIC-LA MALVA-ROSA