



# Actualización en el diagnóstico y tratamiento de la disfagia orofaríngea en personas mayores mediante un abordaje social y sanitario

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PECT de Mataró-Maresme:  
ecosistema d'innovació per  
a les ciutats cuidadores



Fundación  
**Edad & Vida**



**aimsmedical**  
Smart diagnosis through AI

**Salut/** Servei Català  
de la Salut



**FUREGA**  
Fundació de  
Recerca en  
Gastroenterologia

Projecte  
Disfàgia



**HOSPITAL DE MATARÓ**  
CONSORCI SANITARI DEL MARESME

# Disclosures



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**Professor of Surgery. UAB.**

**Board Member. Furega and ACMCB**

**Research funds / clinical trials / consultancy / travel grants**

- UAB, CIBEREHD, Instituto de Salud Carlos III
- PERIS, AGAUR, Generalitat de Catalunya
- Fundació La Marató de TV3. Fundació Agrupació Mútua
- Novartis Medical Nutrition
- Nestlé Health Science
- Fresenius Kabi AG
- Nutricia Advanced Medical Nutrition
- ATMOS Medizin Technik GmbH & Co
- Morinaga Milk Industry Co
- Image & Physiology SL. Aims Medical SL
- ENOVIS. DJO Global. Aimsmedical SL
- Sanofi Genzyme. Fertin Pharma
- Grand Fontaine. La Fageda
- Arcasa SL, Sehrs Food, Campofrio SA.



Projecte  
Disfàgia

# Hospital de Mataró, Barcelona, Catalonia, Spain



Maresme Area, population: 272,567



# INDICE

1. **Disfagia Orofaríngea (DO) en mayores. Definición, prevalencia y factores de riesgo.**
2. **Cribado universal, valoración clínica y diagnóstico instrumental.**
3. **Historia natural y complicaciones clínicas.**
4. **Tratamiento Multimodal:**
  - **Agentes espesantes para una hidratación segura**
  - **Alimentos seguros para pacientes mayores con DO**, dietas de textura modificada y Triple adaptación de la dieta mediterránea para prevenir y tratar la malnutrición y la sarcopenia.
  - **Intervenciones multimodales.** Salud bucodental. MMI y OMI para evitar la infección respiratoria.
5. **Programa de cooperación sanitaria y social en DO**
  - Situación actual. **Plan Estratégico en DO. Societat Catalana de Digestologia-Furega-Ciberehd**
  - **Programa iNEXES-CSC Projectes Innovadors CatSalut**
  - Formación para sanitarios, pacientes y cuidadores sobre los trastornos de la deglución
  - **El testimonio de 2 pacientes**
- 6) **Conclusiones**

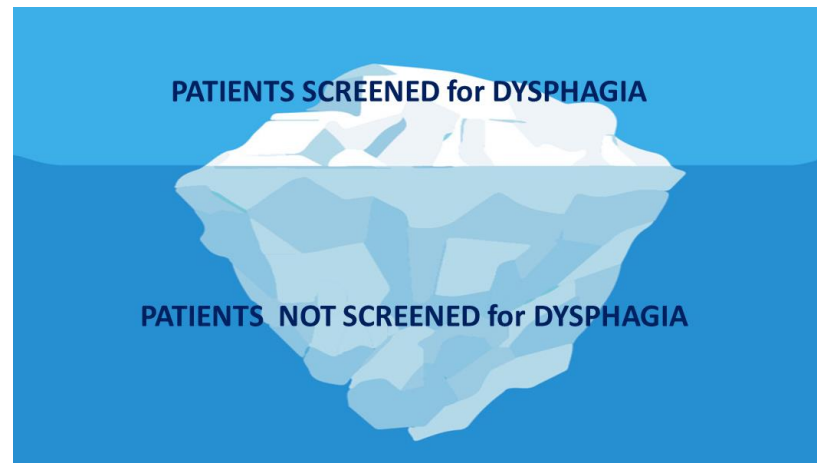




# THE ICEBERG OF DYSPHAGIA, A NEW PANDEMIC

- **Oropharyngeal dysphagia (OD):** involves difficulty or discomfort during the progression of the alimentary bolus from the mouth to the esophagus. **Can include aspirations.**
- It is a condition recognised by the **World Health Organization** with the following International Classification of Diseases (ICD) codes:

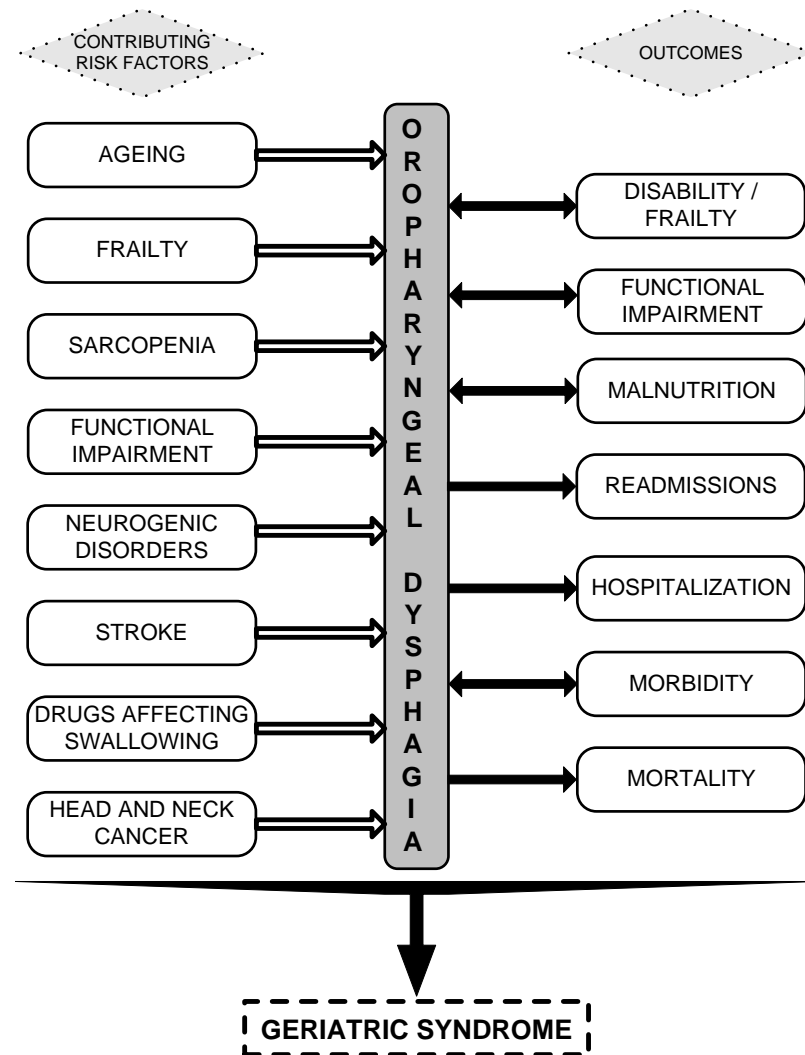
- ICD-9:
  - 787.20 (Dysphagia)
- ICD-10:
  - R13 (Dysphagia)
- ICD-11:
  - MD93 (Dysphagia)



- OD is a **geriatric syndrome (EUGMS-ESSD)**, but It is underdiagnosed in most hospitals and medical centres. In addition, many patients suffering it are not aware of their condition.
- OD = Neglected Condition. **16,000,000 US / 30,000,000 EU / 8,000,000 JPN Citizens with OD**



# OROPHARYNGEAL DYSPHAGIA IS A GERIATRIC SYNDROME

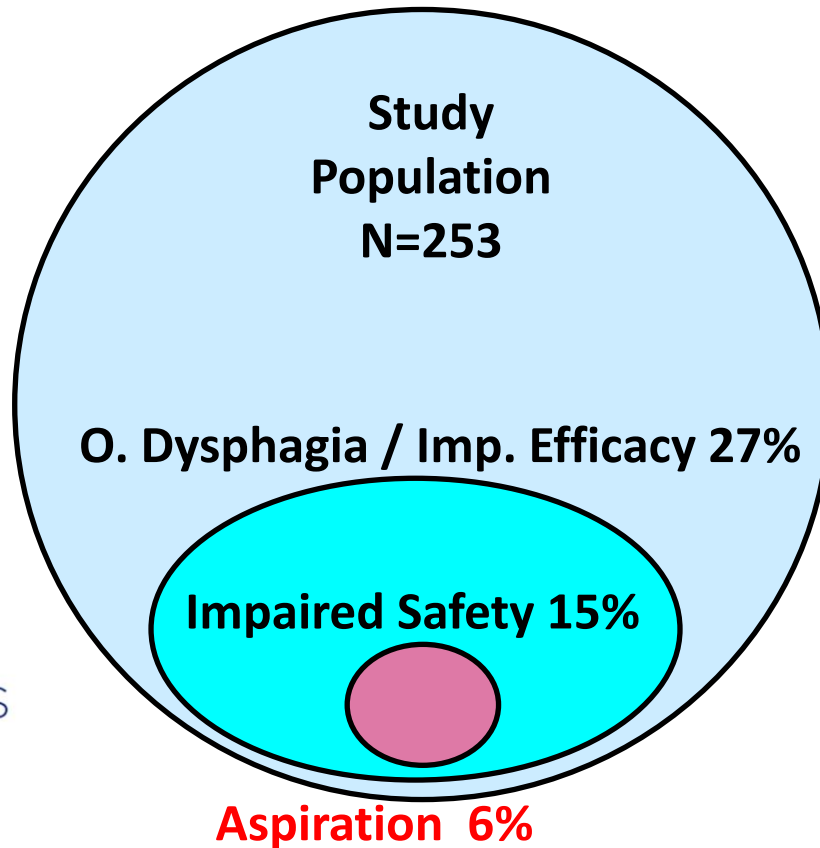


## Geriatric giant requirements

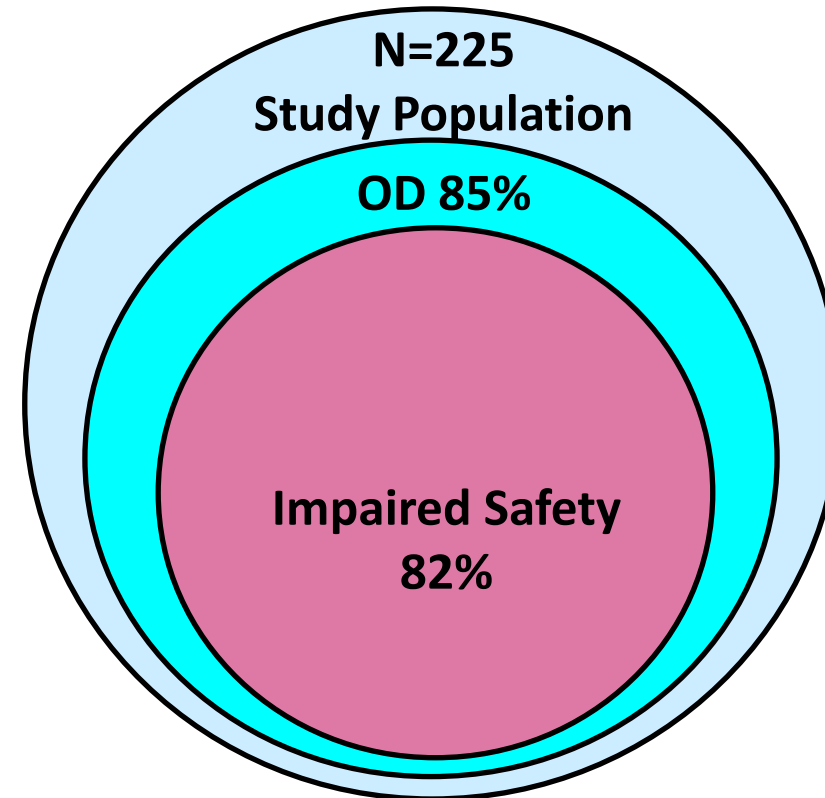
1. Combination of symptoms
2. High prevalence in older persons
3. Common risk factors & interactions with other geriatric syndromes
4. Impaired outcomes
5. Multicomponent intervention

# PREVALENCE OF OD IN OLDER PEOPLE

## Independently Living



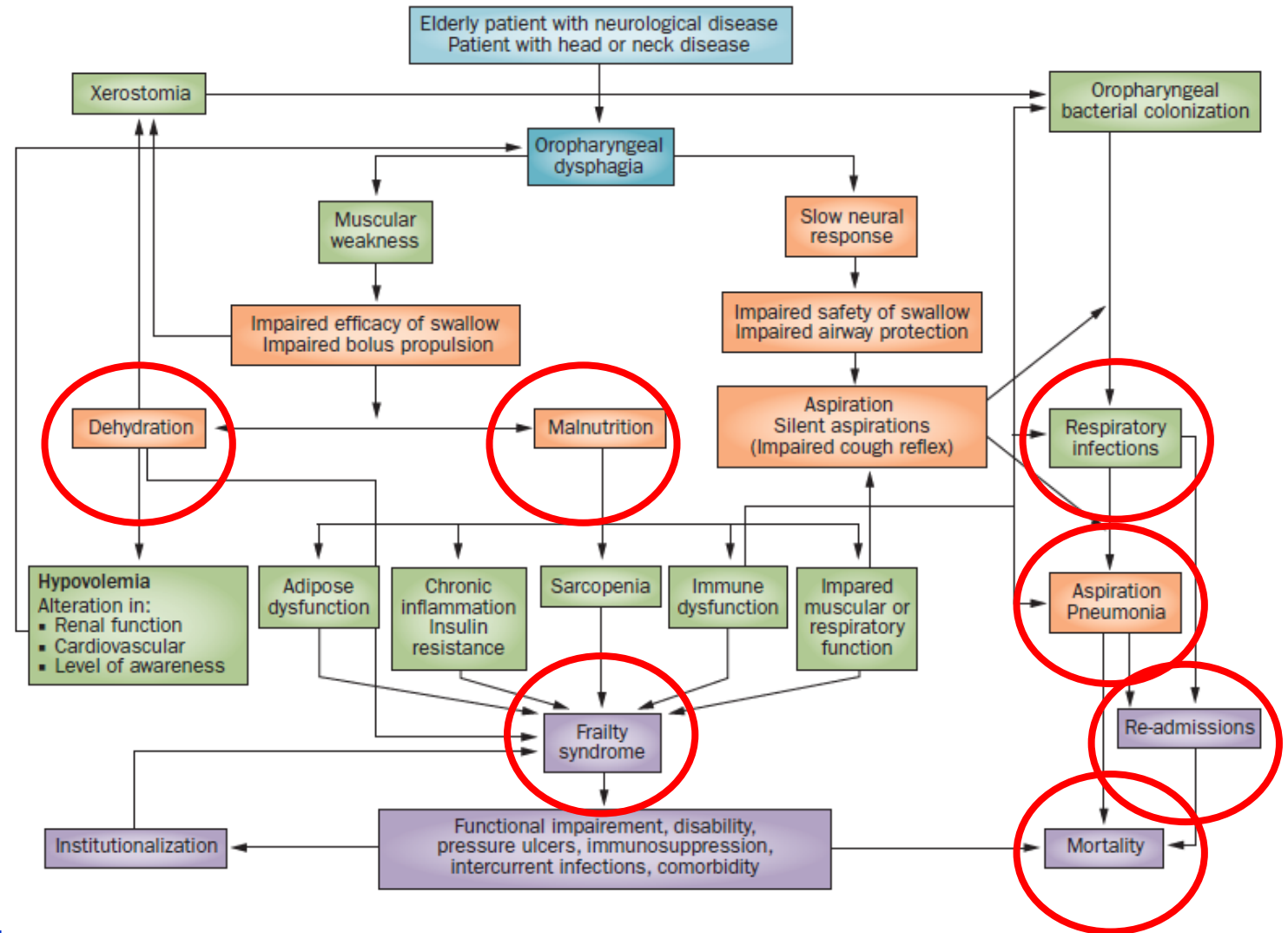
## Psicogeriatric Unit. Dementia





# OD. CLINICAL COMPLICATIONS IN OLDER PERSONS

- Impaired efficacy of swallow:
  - ✓ Dehydration
  - ✓ Malnutrition
  - ✓ Frailty
- Impaired safety of swallow:
  - ✓ Lower respiratory tract infections (LRTI)
  - ✓ Aspiration pneumonia (AP)
  - ✓ Readmissions
  - ✓ Morbi-mortality
- Institutionalization
- Psychological and economic burden. Poor QoL



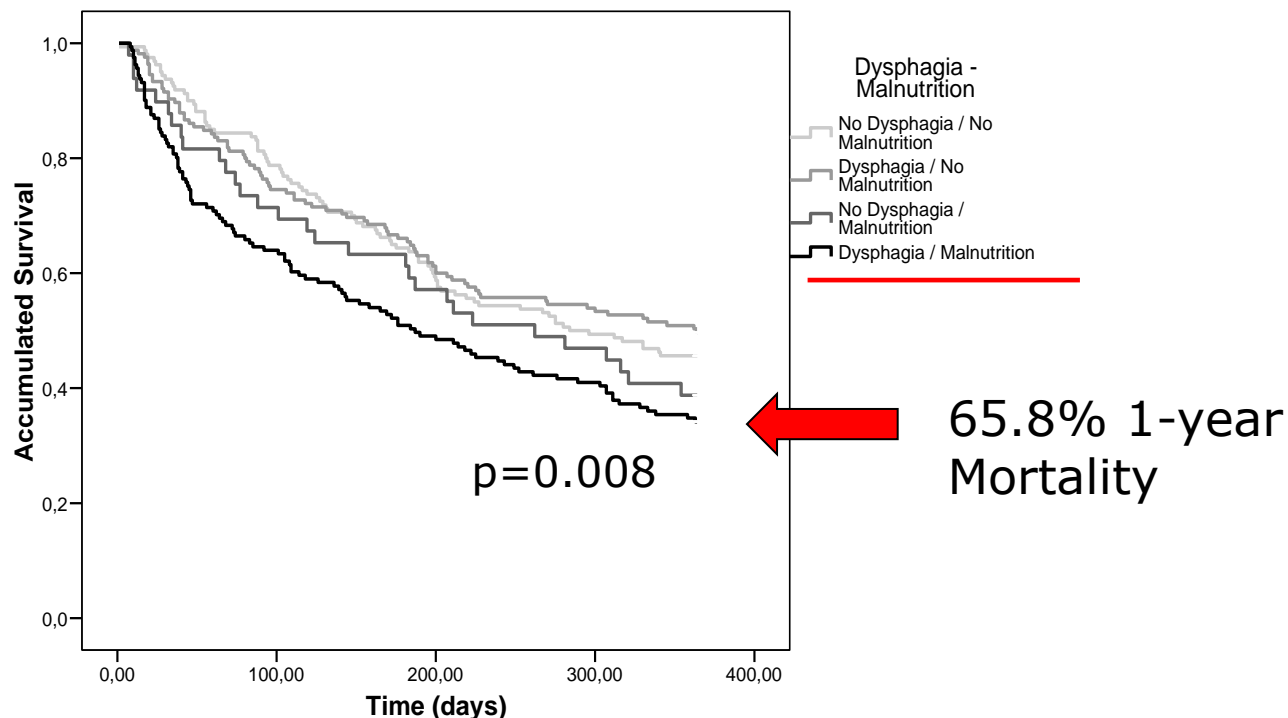
# OD AND MALNUTRITION IN HOSPITALIZED OLDER PATIENTS

Oropharyngeal dysphagia is a prevalent risk factor for MN in a cohort of 1662 older patients admitted with an acute disease to a general hospital.

Carrion S, Clavé P. Clin Nutr, 2015 Jun 34(3):436-42

- **Prevalence of OD: 47.4% / Prevalence of MN in OD: 45.3%**
- **Prevalence of MN: 30.6% / Prevalence of OD in MN: 68.4%**

Survival Function by Dysphagia and Malnutrition



# TYPE OF MALNUTRITION AND DEHYDRATION IN OD

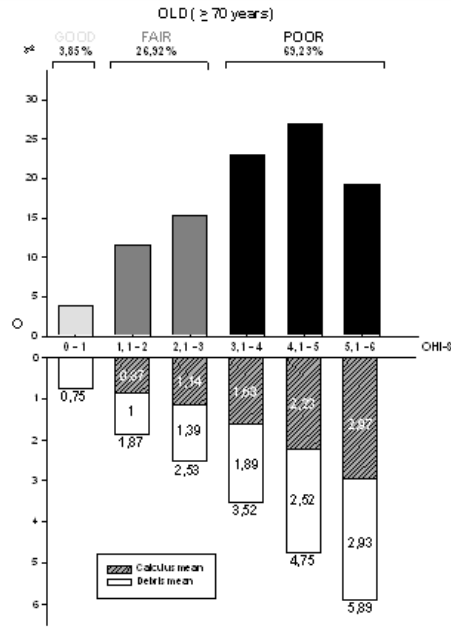
- [Nutritional status of older patients with oropharyngeal dysphagia in a chronic versus an acute clinical situation.](#) Carrión S, Roca M, Costa A, Arreola V, Ortega O, Palomera E, Serra-Prat M, Cabré M, Clavé P. **Clin Nutr.** 2016 Jul 26. pii: S0261-5614(16)30175-3.



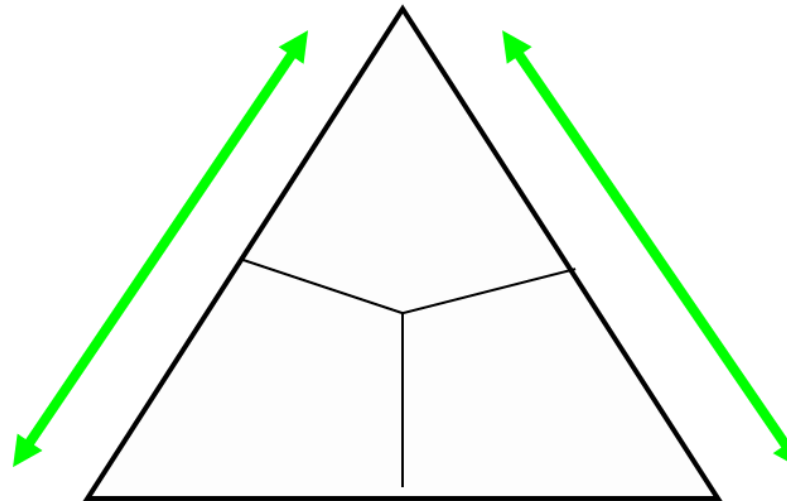
## Older hospitalized patients with OD:

- **51.1-69.5 % MNA < 23.5**
- Protein-caloric malnutrition
- **16.7%-29.4% Sarcopenia**
- More severe reduction in visceral protein and muscular mass in acute situation.
- **100% Dehydration (intracellular)**

# Pathophysiology of Aspiration Pneumonia



**A) POOR ORAL HEALTH  
COLONIZATION BY  
RESPIRATORY PATHOGENS**



**C) FRAIL / VULNERABLE PATIENT  
MALNUTRITION  
POOR IMMUNITY**

**B) O. DYSPHAGIA  
IMPAIRED SAFETY SWALLOW  
ASPIRATIONS  
IMPAIRED COUGH REFLEX**

**ASPIRATION PNEUMONIA = A + B + C**

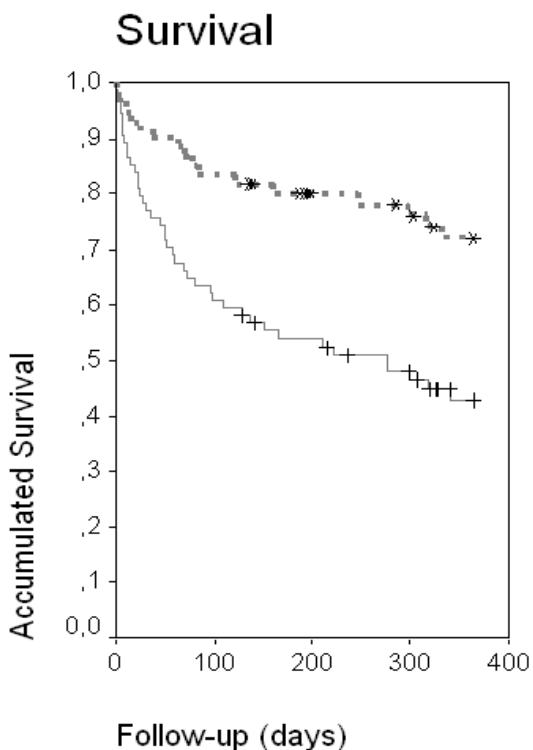
# ASPIRATION PNEUMONIA IN OLDER PERSONS

Age and Ageing 2010; 39: 39-45  
doi: 10.1093/ageing/afp100  
Published electronically 26 June 2009

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## Prevalence and prognostic implications of dysphagia in elderly patients with pneumonia

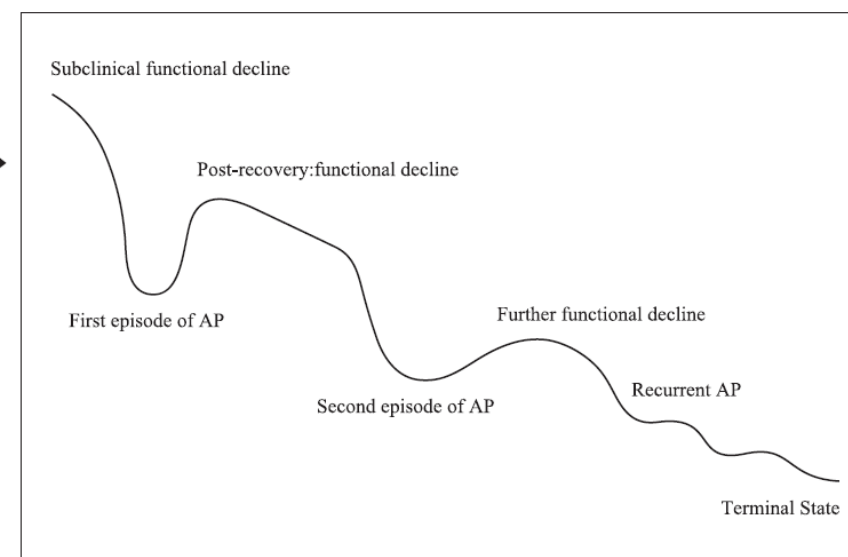
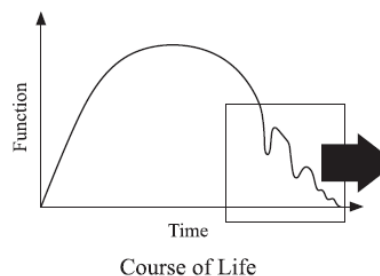
MATEU CABRE<sup>1</sup>, MATEU SERRA-PRAT<sup>2</sup>, ELISABET PALOMERA<sup>2</sup>, JORDI ALMIRALL<sup>3</sup>, ROMAN PALLARES<sup>4</sup>, PERE CLAVÉ<sup>5</sup>



SAFE  
SWALLOW

DYSPHAGIA

## Course of Aspiration Pneumonia. Readmissions



- 1-YEAR MORTALITY (>80 yr):
  - 55.4% Oropharyngeal dysphagia
  - 26.7% no dysphagia



# Annual incidence of readmissions (>70yr).

## H. Mataró. Catalonia



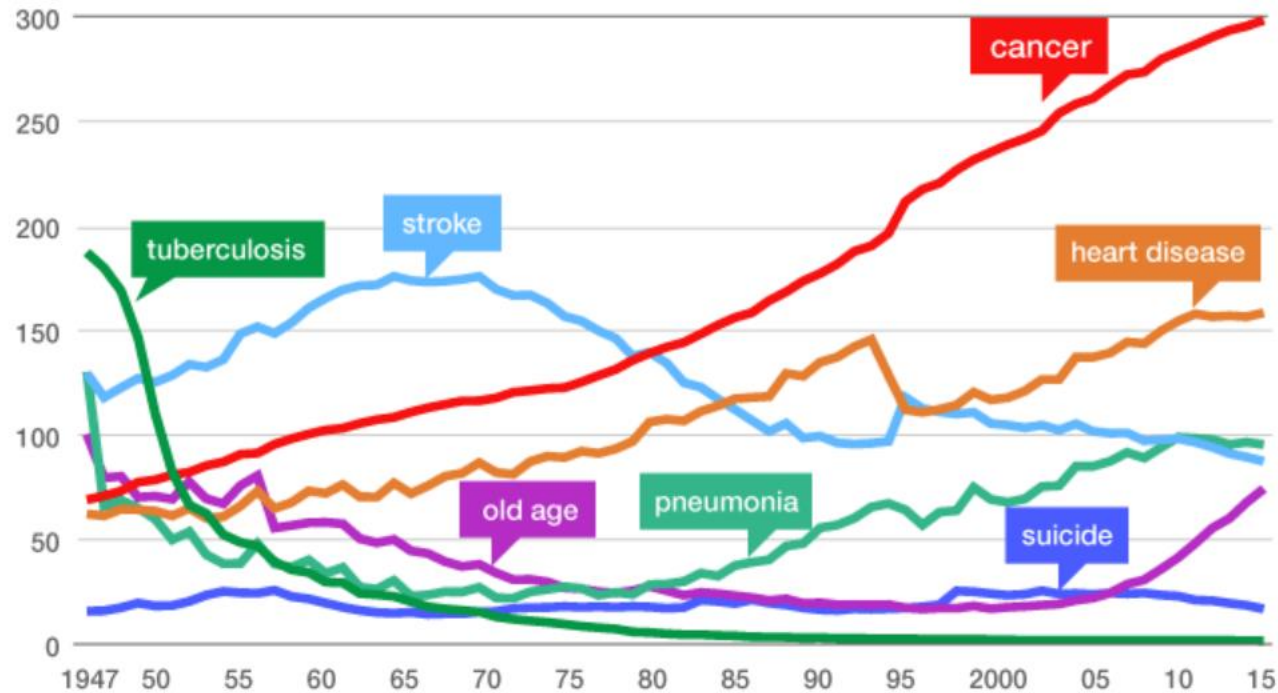
	readmissions/ 100 person- year	95% CI	Attributable risk	Relative risk
<b>For any cause</b>				
No dysphagia	<b>39.2</b>	<b>37.0-41.5</b>		
Dysphagia	<b>48.7</b>	<b>45.6-51.9</b>	<b>9.5</b>	<b>1.24</b>
<b>For pneumonia</b>				
No dysphagia	<b>2.8</b>	<b>2.2-3.4</b>		
Dysphagia	<b>7.9</b>	<b>6.6-9.1</b>	<b>5.1</b>	<b>2.84</b>
<b>For pneumonia or Low Respiratory Tract Infection (LRTI)</b>				
No dysphagia	<b>17.5</b>	<b>16.0-19.1</b>		
Dysphagia	<b>24.6</b>	<b>22.4-26.9</b>	<b>7.1</b>	<b>1.40</b>



# MORTALITY IN AGED SOCIETIES

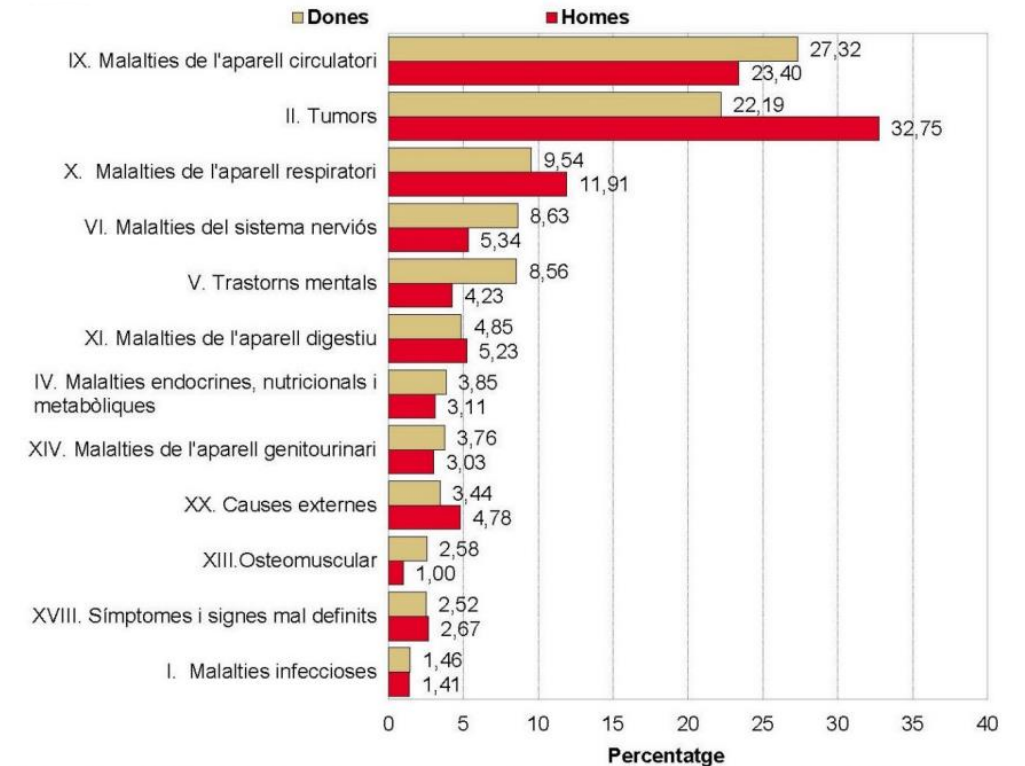


## Death Rates by Cause



The death rate is defined as the number of deaths per 100,000 people.  
Created by *Nippon.com* based on the Vital Statistics report published in 2018  
by the Ministry of Health, Labor, and Welfare

Figura 3. Nombre de defuncions segons causes de mort (20 grans grups) i sexe. Catalunya, 2019



Notes: La figura mostra les 12 causes més comunes de mortalitat segons 20 grans grups. Aquests 12 grups acumulen el 98,70% de les causes entre les dones i el 98,85% entre els homes


# The Healthcare Costs of Post-Stroke OD

european journal of neurology  
the official journal of the european academy of neurology



ORIGINAL ARTICLE |  Open Access

## Healthcare costs of post-stroke oropharyngeal dysphagia and its complications: malnutrition and respiratory infections

Sergio Marin , Mateu Serra-Prat, Omar Ortega, Monica Audouard Fericgla, Jordi Valls, Elisabet Palomera, Ramon Cunillera, Ernest Palomeras, Josep Maria Ibàñez, Pere Clavé

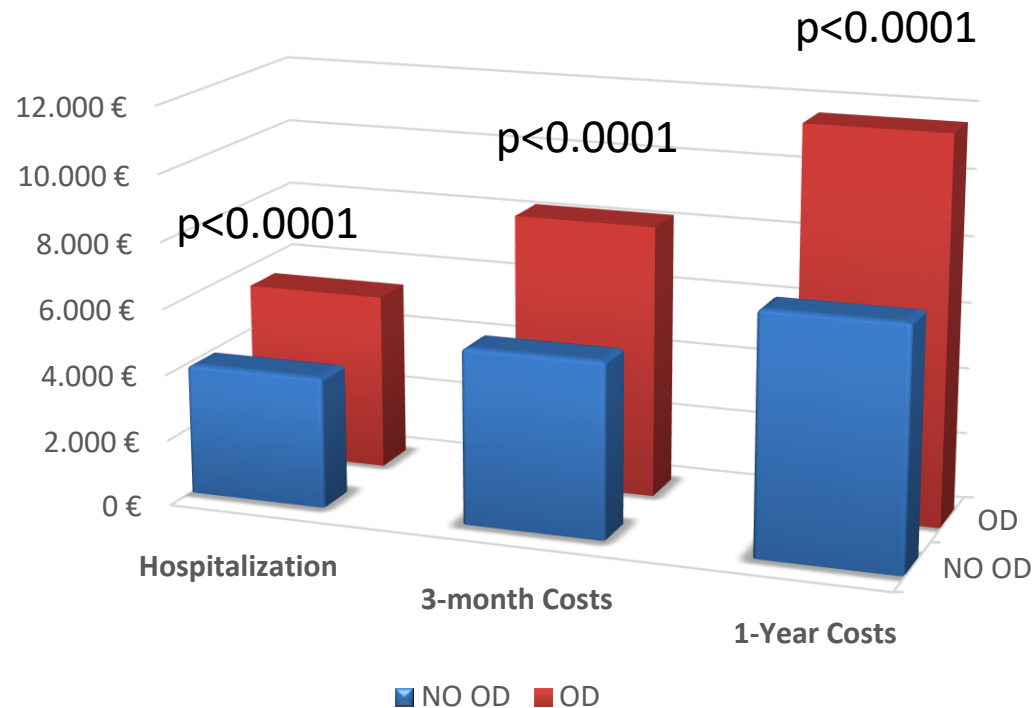
First published: 27 June 2021 | <https://doi.org/10.1111/ene.14998>

- The main aim of this study is to describe the acute and long-term costs related to OD and its main complications after stroke.

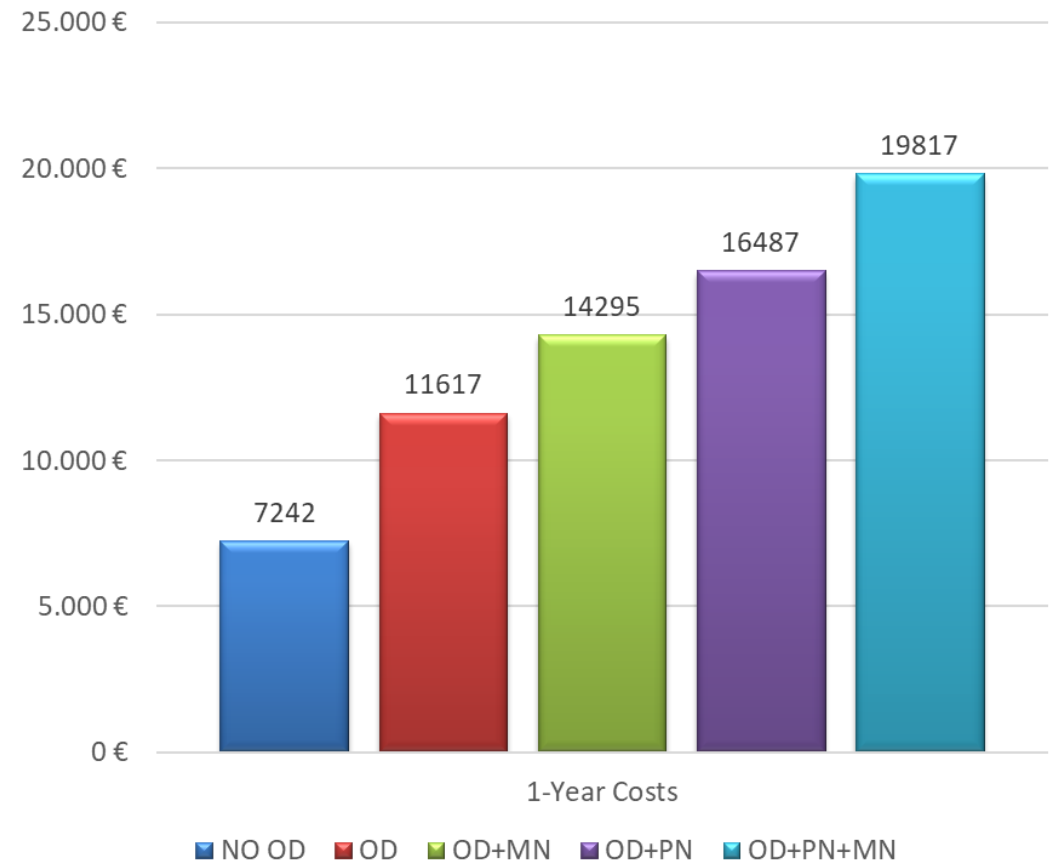


# HEALTHCARE COSTS OF POST-STROKE OD AT MATARÓ HOSPITAL

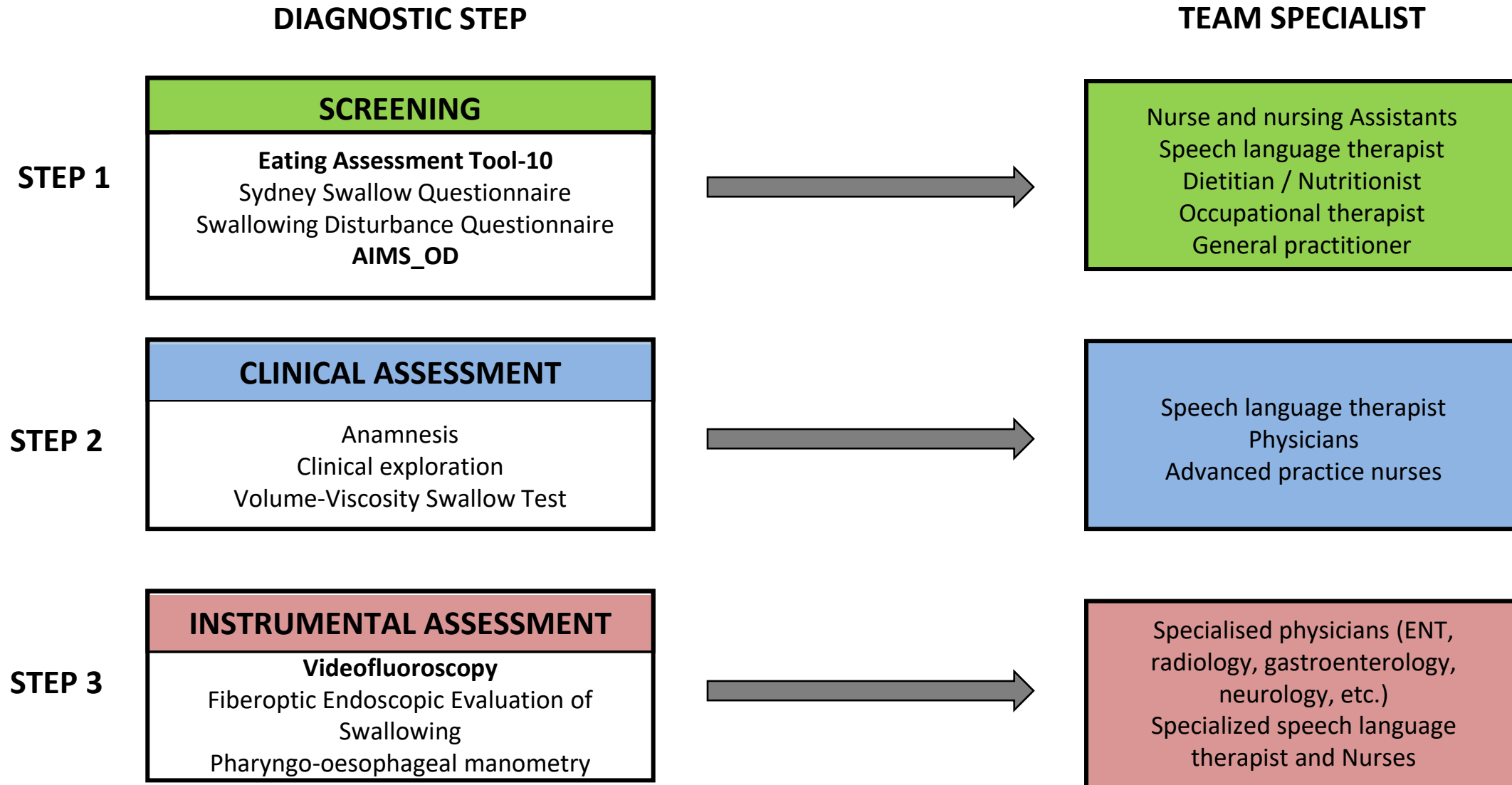
## COST OF POST-STROKE OD



## 1-YR COST OF OD COMPLICATIONS



# OD. Diagnostic Process: State of the art



# CLINICAL SCREENING = EAT-10



## HISTORY AND SCIENCE BEHIND THE EATING ASSESSMENT TOOL-10 (EAT-10): LESSONS LEARNED

The EAT-10 showed sensitivity of 89% and specificity of 82% for OD. (Rofes L and Clavé, 2014).

- 1 My swallowing problem has caused me to **lose weight**.
- 2 My swallowing problem interferes with my ability **to go out for meals**.
- 3 Swallowing liquids takes **extra effort**.
- 4 Swallowing solids takes **extra effort**.
- 5 Swallowing pills takes **extra effort**.
- 6 Swallowing is **painful**.
- 7 The **pleasure of eating is affected** by my swallowing.
- 8 When I swallow food **sticks in my throat**.
- 9 I **cough** when I eat.
- 10 Swallowing is **stressful**.

J Nutr Health Aging. 2023;  
Published online

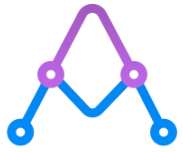
Review

### History and Science behind the Eating Assessment Tool-10 (Eat-10): Lessons Learned

A. Schindler<sup>1</sup>, M. de Fátima Lago Alvite<sup>2</sup>, W.G. Robles-Rodriguez<sup>3</sup>, N. Barcons<sup>4</sup>, P. Clavé<sup>5</sup>

1. Department of Biomedical and Clinical Sciences 'Luigi Sacco', University of Milan, Milan, Italy; 2. Fonoaudiology, Placi Hospital, Rio de Janeiro, Brazil; 3. Facultad de Medicina, Fundación Universitaria de Ciencias de la Salud, Bogotá, Colombia; 4. Medical Affairs, Nestlé Health Science, Vevey, Switzerland; 5. Gastrointestinal Physiology Laboratory, Hospital de Mataró, Universitat Autònoma de Barcelona, Mataró, Spain; Centro de Investigación Biomédica en Red de Enfermedades Hepáticas y Digestivas (Ciberehd), Instituto de Salud Carlos III, Barcelona, Spain

**Cutoff 2 or 3. Takes 5 minutes/patient**



**aimsmedical**  
Smart diagnosis through AI

**S/** Sistema de  
Salut de Catalunya

**/Salut**



## Solutions

Automatic dysphagia screening of large volumes of patients in seconds.

Brings to your hospital the knowledge of a multidisciplinary team with more than 20 years of experience in the diagnosis and treatment of patients with oropharyngeal dysphagia.

- Artificial Intelligence
- Machine Learning

<https://aimsmedical.ai/>



**WDS2021**

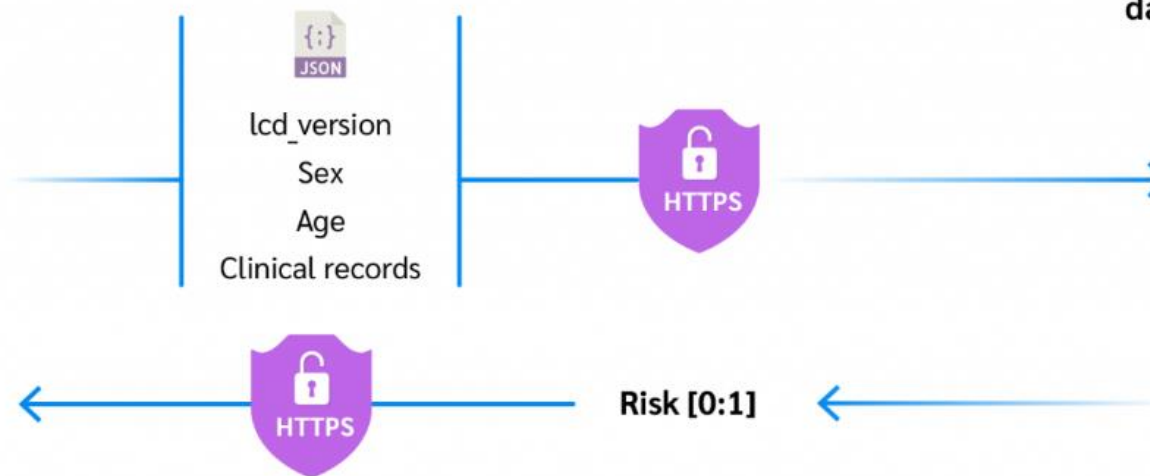


2024: Screening 2.5 Million people for OD every day

# AIMS-OD IS ALREADY WORKING AT MATARO HOSPITAL



Automatic transmission  
of anonymized data

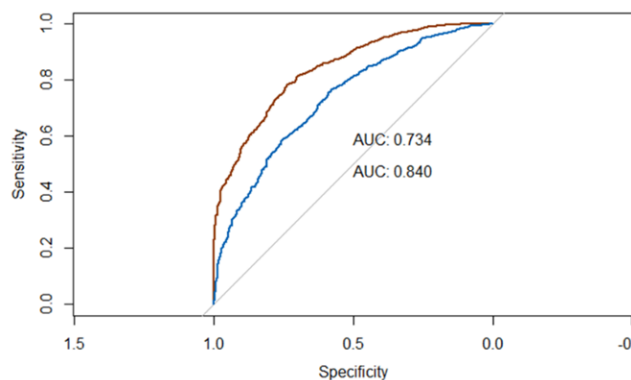
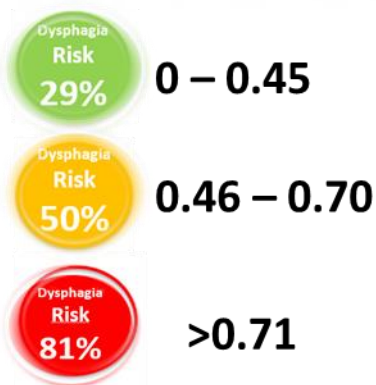


Query sent to IA  
inference engine that  
performs user evaluation  
data and query format



IT Systems Department

Risk of  
Dysphagia

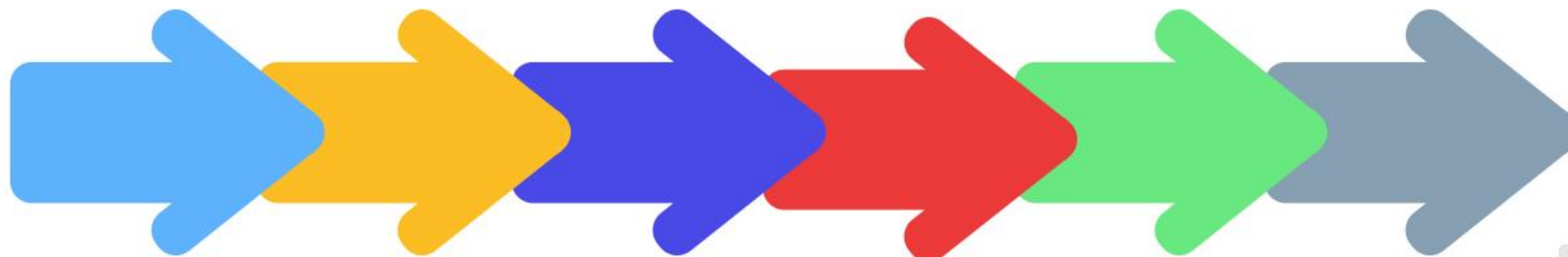


High-performance  
computing

PSYCHOMETRICS	
Sensitivity	0.86
Specificity	0.83
PPV	0.83
NPV	0.66



2024: Screening 2.5 Million people for OD every day



**GO TO MARKET**

**2018**  
First prototype  
AIMS-OD

**2020-2022**  
Valorization  
AIMS-OD

**2023**  
Systematic screening  
11 hospitals

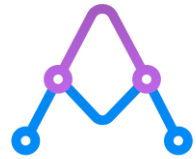


**Proposta CSC**  
Projectes Transformadors -  
CatSalut





# New diagnostic algorithm for OD

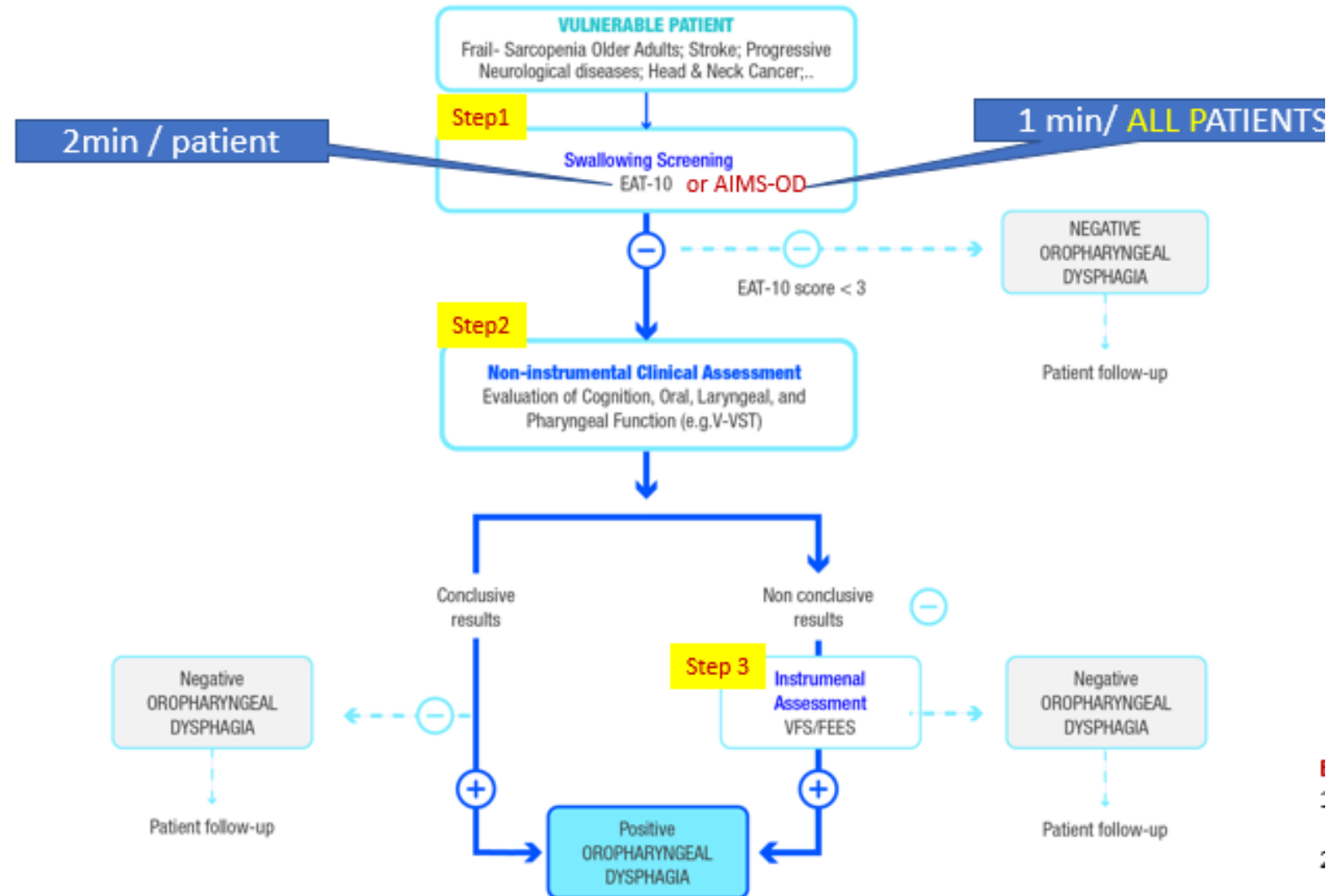


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Smart diagnosis through AI

**Salut/** Servei Català  
de la Salut



**Consorci de Salut i  
Social de Catalunya**





ACCIÓ



Generalitat de Catalunya



mèntor CSdM  
mentoring in health innovation



\* FUREGA  
Fundació de Recerca en Gastroenterologia

Projecte Disfàgia



CONSORCI SANITARI DEL MARESME



PECT de Mataró-Maresme:  
ecosistema d'innovació per a les ciutats cuidadores



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DSC Consorci de Salut i Social de Catalunya



# Clinical Diagnosis of OD. V-VST

Review  
**A Systematic and a Scoping Review on the Psychometrics and Clinical Utility of the Volume-Viscosity Swallow Test (V-VST) in the Clinical Screening and Assessment of Oropharyngeal Dysphagia**

Stephanie A. Riera <sup>1,2</sup>, Sergio Marin <sup>1,3</sup>, Mateu Serra-Prat <sup>4</sup>, Noemí Tomsen <sup>1,5</sup>, Viridiana Arreola <sup>1</sup>, Omar Ortega <sup>1,5</sup>, Margaret Walshe <sup>6</sup> and Pere Clavé <sup>1,2,5,\*</sup>

- **V-VST had a diagnostic sensitivity for OD of 93.17%, 81.39% specificity, and an inter-rater reliability Kappa = 0.77.**
- Quality of studies in SR was graded as high with low risk of bias.

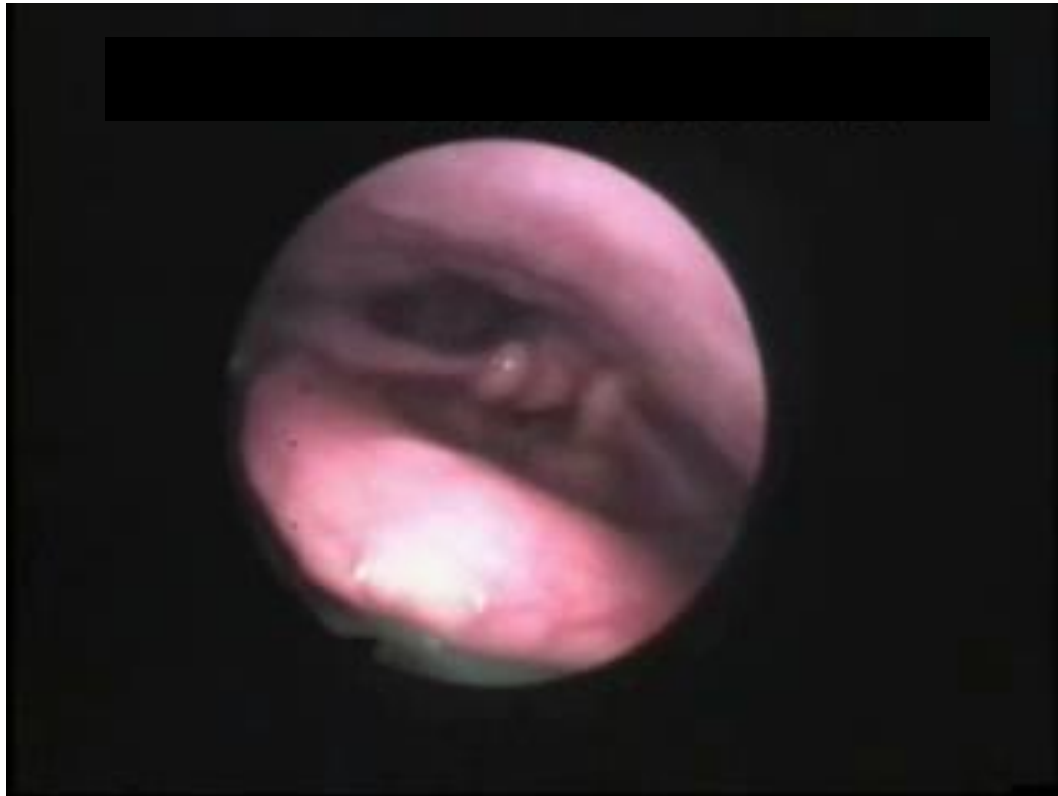
• **Foods.** 2021 Aug 16;10(8):1900. doi: 10.3390/foods10081900.



**COUGH = IMPAIRED SAFETY = ASPIRATION**

# INSTRUMENTAL DIAGNOSIS FEES/VFS

## FIBEROPTIC ENDOSCOPIC EVALUATION OF SWALLOWING (FEES)



## VIDEOFLUOROSCOPY (VFS)



Aspiration: 25-35% patients with oropharyngeal dysphagia

## Characteristics and Therapeutic Needs of Older Patients with Oropharyngeal Dysphagia Admitted to a General Hospital

*P. Viñas<sup>1</sup>, A. Martín-Martínez<sup>1,2</sup>, M. Cera<sup>1</sup>, S.A. Riera<sup>1</sup>, R. Escobar<sup>1</sup>, P. Clavé<sup>1,2</sup>, O. Ortega<sup>1,2</sup>*

1. Gastrointestinal Physiology Laboratory CIBERehd CSdM-UAB, Hospital de Mataró, Consorci Sanitari del Maresme, Universitat Autònoma de Barcelona, Mataró, Spain; 2. Centro de Investigación Biomédica en Red de Enfermedades Hepáticas y Digestivas (CIBERehd), Barcelona, Spain.

*Corresponding Author:* Pere Clavé MD, PhD. Gastrointestinal Physiology Laboratory. CIBERehd CSdM-UAB. Hospital de Mataró. Carretera de Cirera 230, 08304. Mataró (Barcelona), Spain. Tel. +34 93 741 77 00. Fax. +34 93 741 77 33. E-mail: pere.clave@ciberehd.org

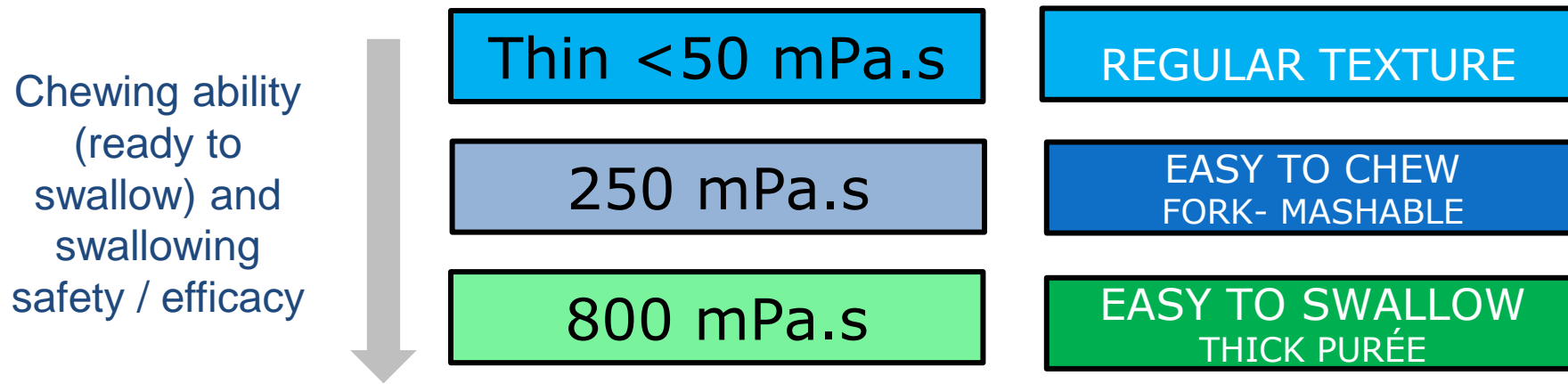
- We included 235 patients (87.3±5.5 years) with OD hospitalized for acute diseases (9.6±7.6 days).
- **Moreover, 85.1% presented signs of impaired safety and 84.7% efficacy of swallow.**
- **Up to 48% required fluid adaptation with a xanthan gum-based thickener (89.4% at 250 mPa·s; 10.6% at 800 mPa·s).**
- **Up to 93.2% required a texture-modified diet (TMD) (74.4%, fork-mashable; 25.6%, pureed).**
- **A total of 98.7% had nutritional risk, 32.3% sarcopenia and 75.3% dehydration.**
- **OH was moderate (Oral Hygiene Index-simplified: 2.0±1.3) and 67.4% had periodontitis.**
- QoL self-perception was 62.2% and 5.5% of patients died during hospitalization.

# Triple Adaptation of the Mediterranean Diet: Design of A Meal Plan for Older People with Oropharyngeal Dysphagia Based on Home Cooking

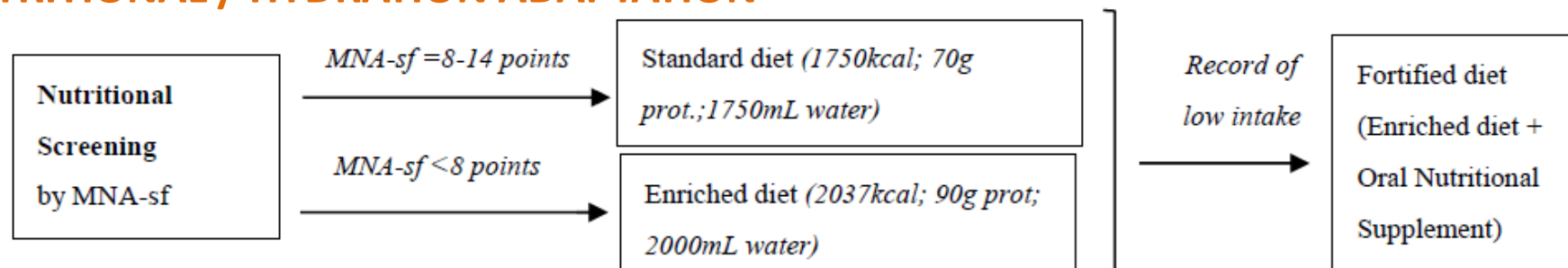
Alicia Costa <sup>1,2,3,\*</sup>, Silvia Carrión <sup>1,2</sup>, Marc Puig-Pey <sup>4</sup>, Fabiola Juárez <sup>4</sup> and Pere Clavé <sup>1,2,5,\*</sup>



## 1) VISCOSITY (FLUIDS) AND TEXTURE (SOLIDS) ADAPTATION



## 2) NUTRITIONAL / HYDRATION ADAPTATION

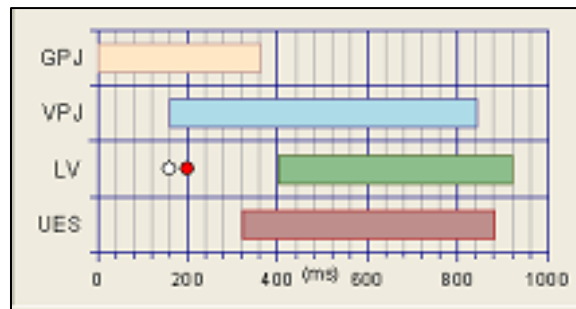


# Thickening agents. Bolus viscosity

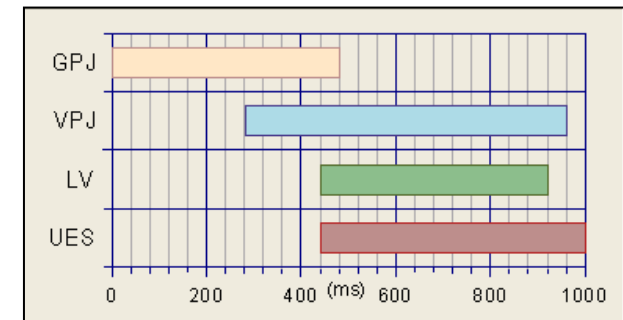
10 mL Thin Liquid <50 mPa·s



10 mL 200 mPa·s



**Aspiration (LVC=400 ms)**



**No Aspiration (LVC=420 ms)**



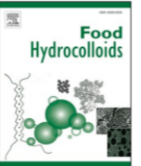
# Thickening Products. Reimbursed by SNS



Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Food Hydrocolloids

journal homepage: [www.elsevier.com/locate/foodhyd](http://www.elsevier.com/locate/foodhyd)



A bit thick: Hidden risks in thickening products' labelling for dysphagia treatment

M. Bolivar-Prados<sup>a,b</sup>, N. Tomsen<sup>a,b</sup>, C. Arenas<sup>a,b</sup>, L. Ibáñez<sup>c</sup>, P. Clave<sup>a,b,\*</sup>

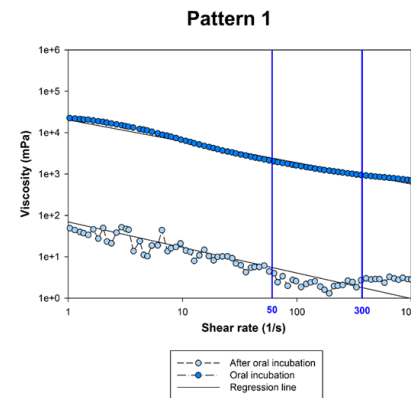
<sup>a</sup> Gastrointestinal Physiology Laboratory, Hospital de Mataró, Universitat Autònoma de Barcelona, Mataró, Spain

<sup>b</sup> Centro de Investigación Biomédica en Red de Enfermedades Hepáticas y Digestivas (Ciberehd), Barcelona, Spain

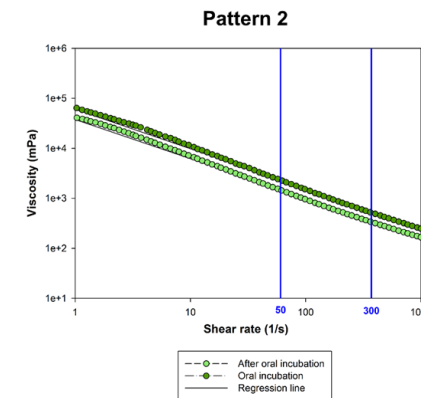
<sup>c</sup> Medicine and Health Science Faculty, Biomedicine Department, Universitat de Barcelona, Spain

## FOOD FOR SPECIAL MEDICAL PRUPOSES. EFSA-AESAN

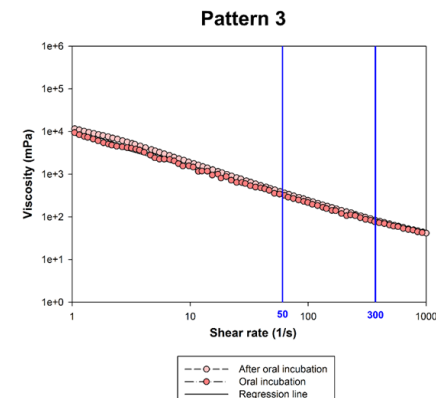
- Covered by SNS in Spain
- Strong claims without submitting a NHC dossier (e.g. “designed specifically for the dietary management of patients with swallowing difficulties”, “Potential to enhance swallowing safety”).
- Mode of action must be substantiated with scientific evidence



STARCH  
MALTODEXTRINES



MIXED



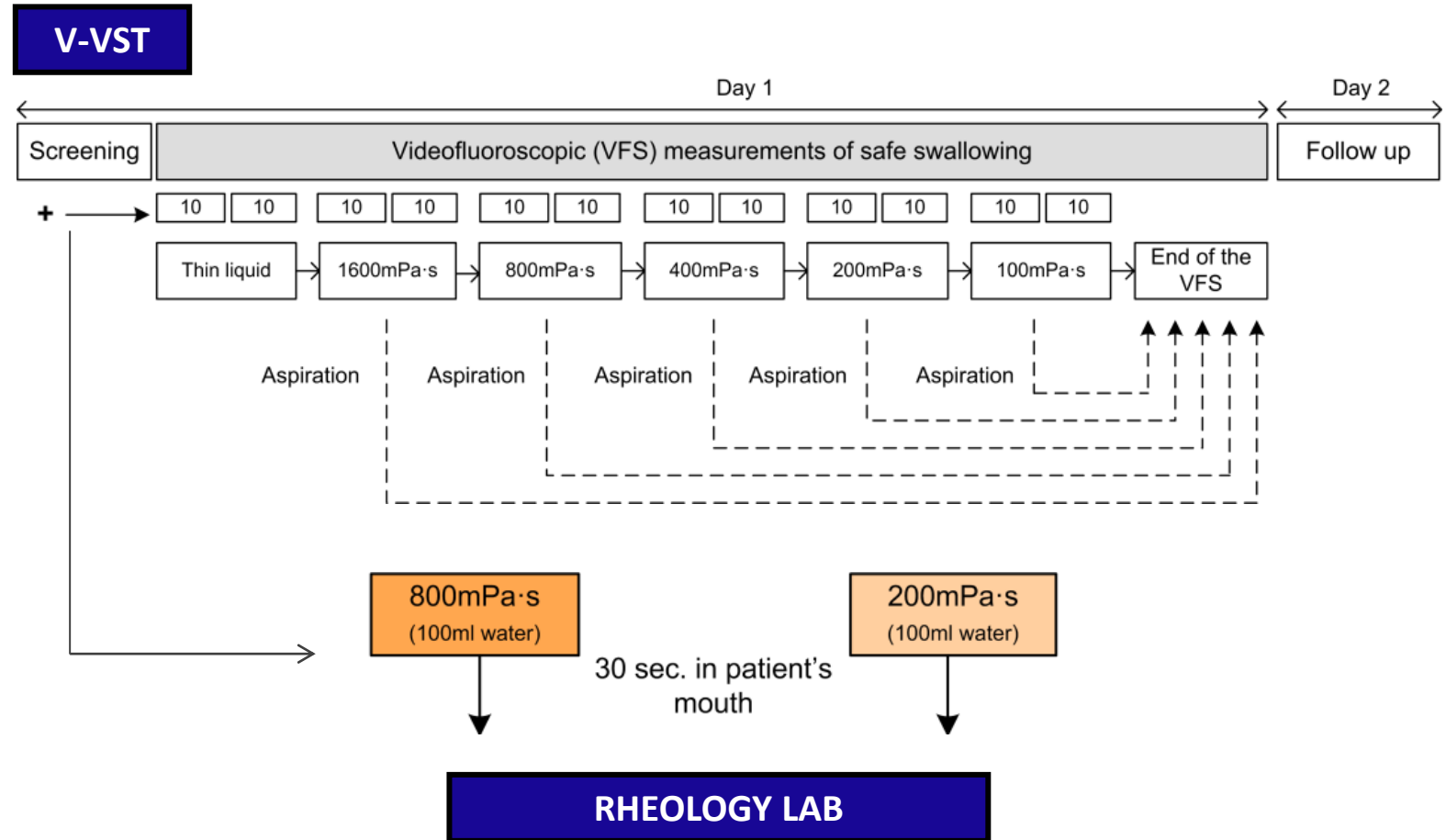
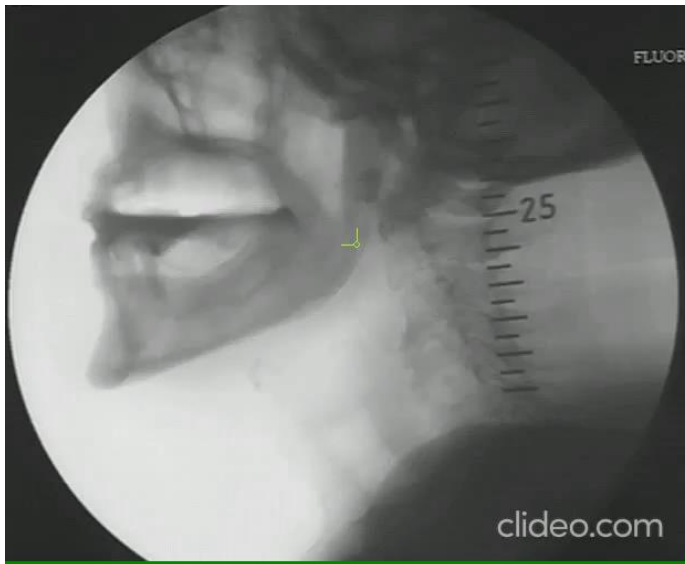
XANTHAN-GUM

# Methods / Experimental Design

## Inclusion Criteria

- Age >70 years and clinical signs of OD
- Positive screening (V-VST)
- OD: swallowing dysfunction, based on VFS (PAS $\geq$ 3)
- Written informed consent

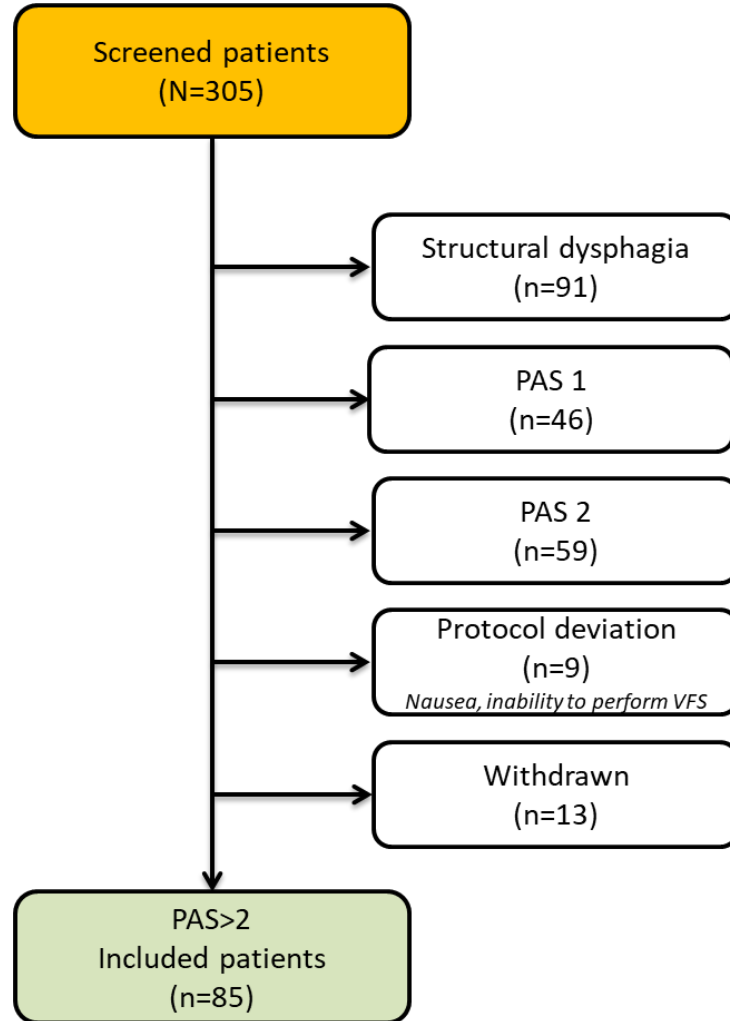
**VFS PAS $\geq$ 3**



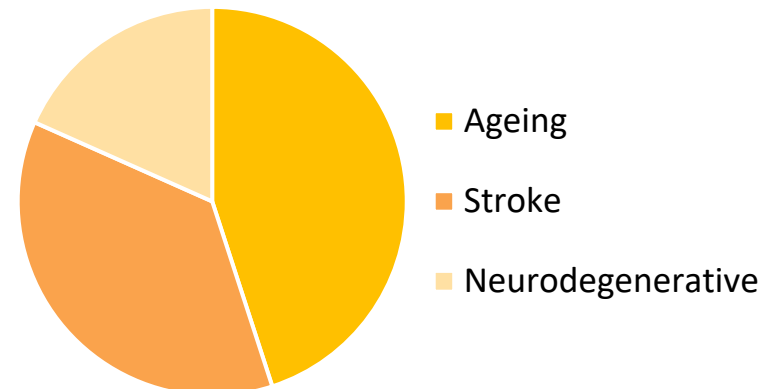
**VFS:** 10 mL boluses. Tsururinko Quickly (TQ), 50 mL 1:1 Omnipaque + water.

**Rheology:** TQ in 100 mL mineral water. 15 mL boluses incubated for 30 s.

# Patients Included. Demographics



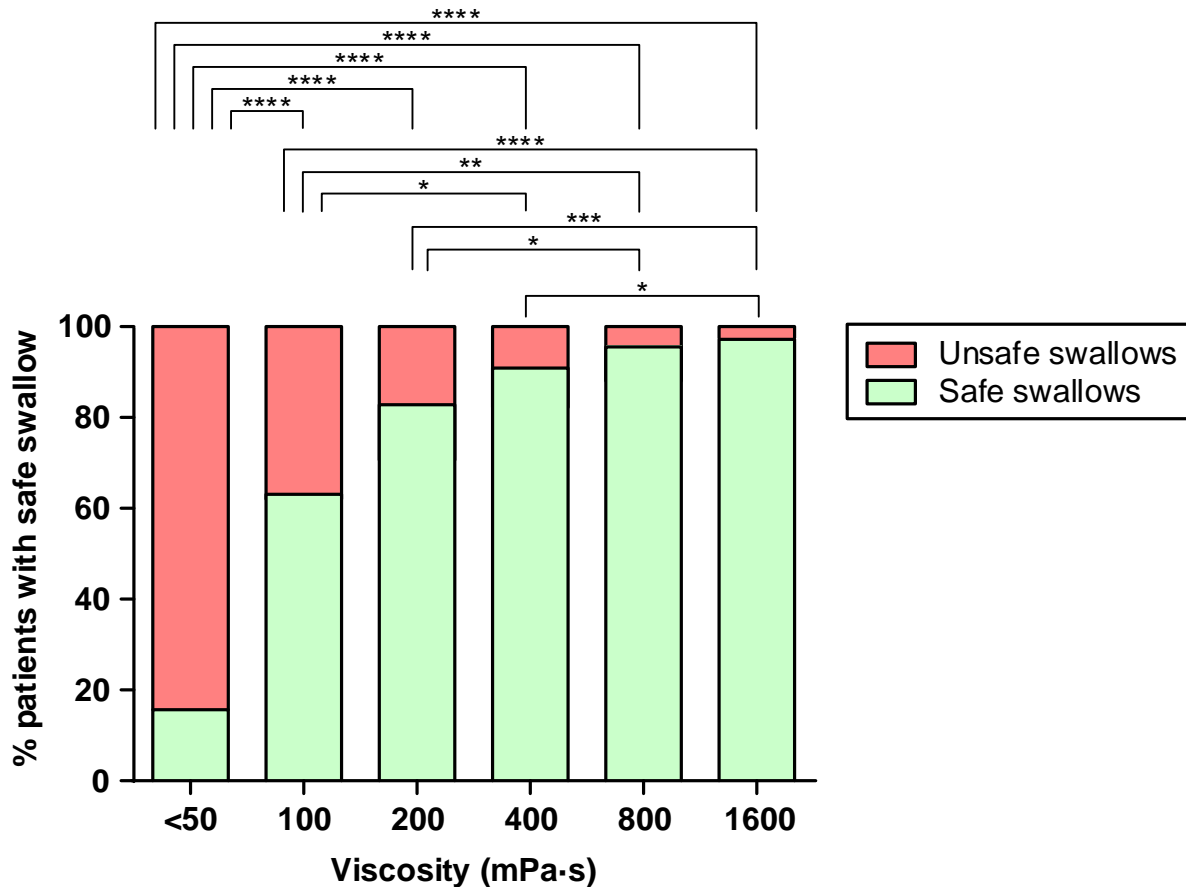
Demographics	
<b>Age</b> (Mean±SD)	83±6.93
<b>Gender</b> (% male)	53.33
<b>OD causes (%)</b>	
Ageing	45.00
Stroke	36.67
Neurodegenerative diseases	18.33





## Therapeutic effect

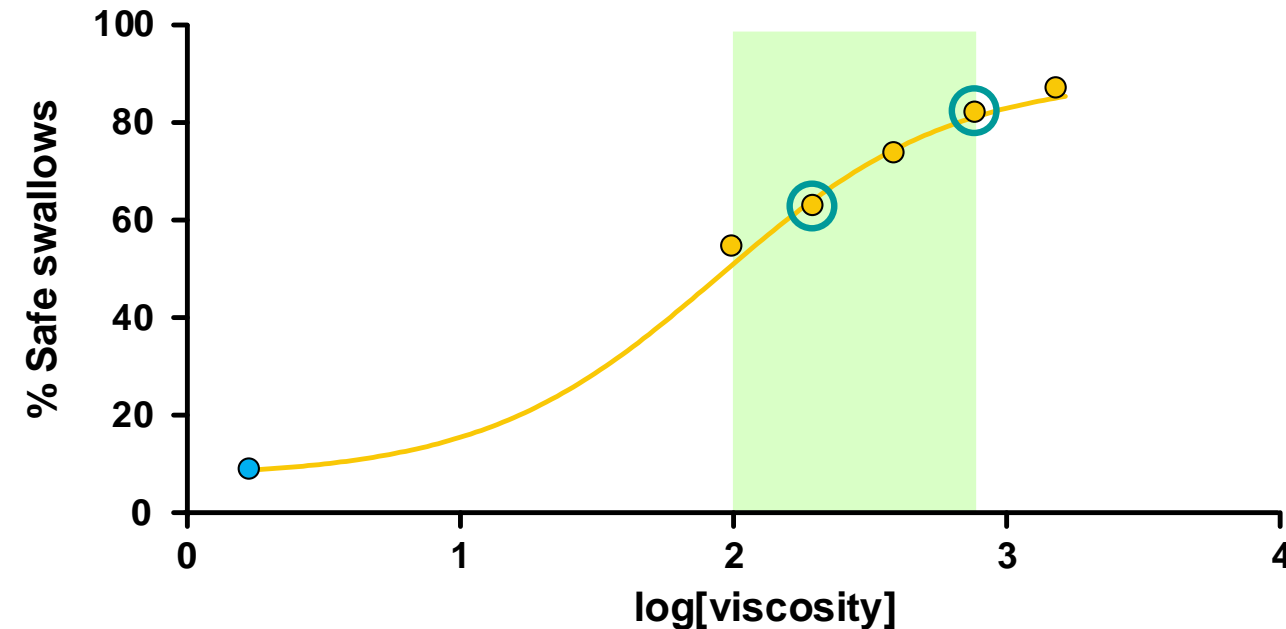
Patients with Safe vs Unsafe swallows



## Therapeutic effect

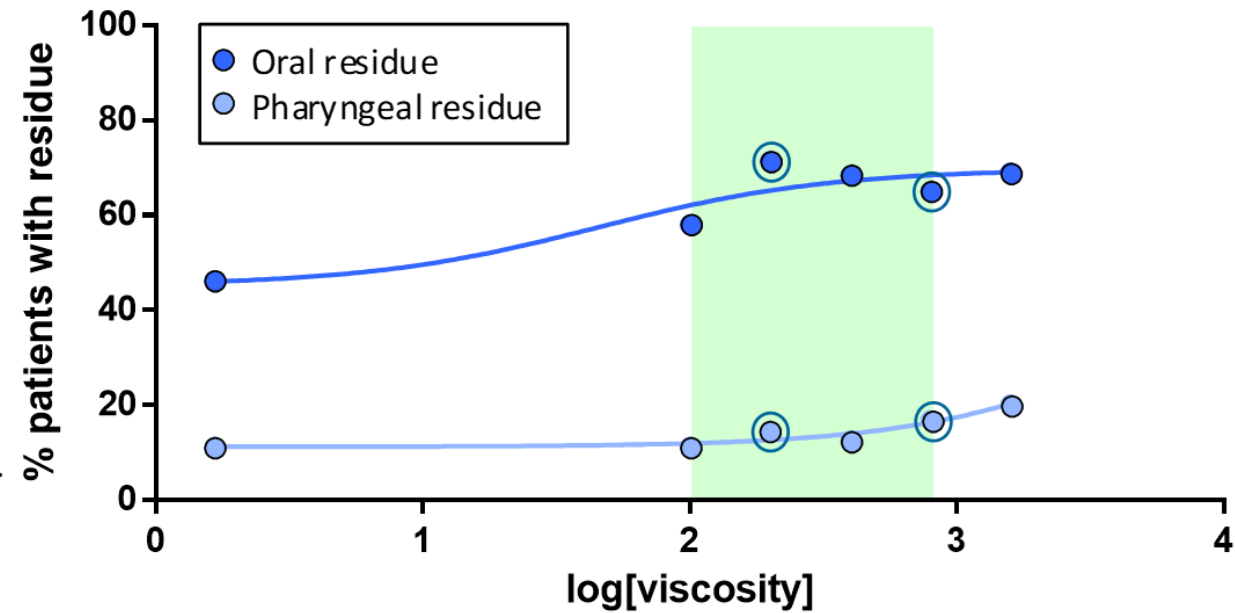
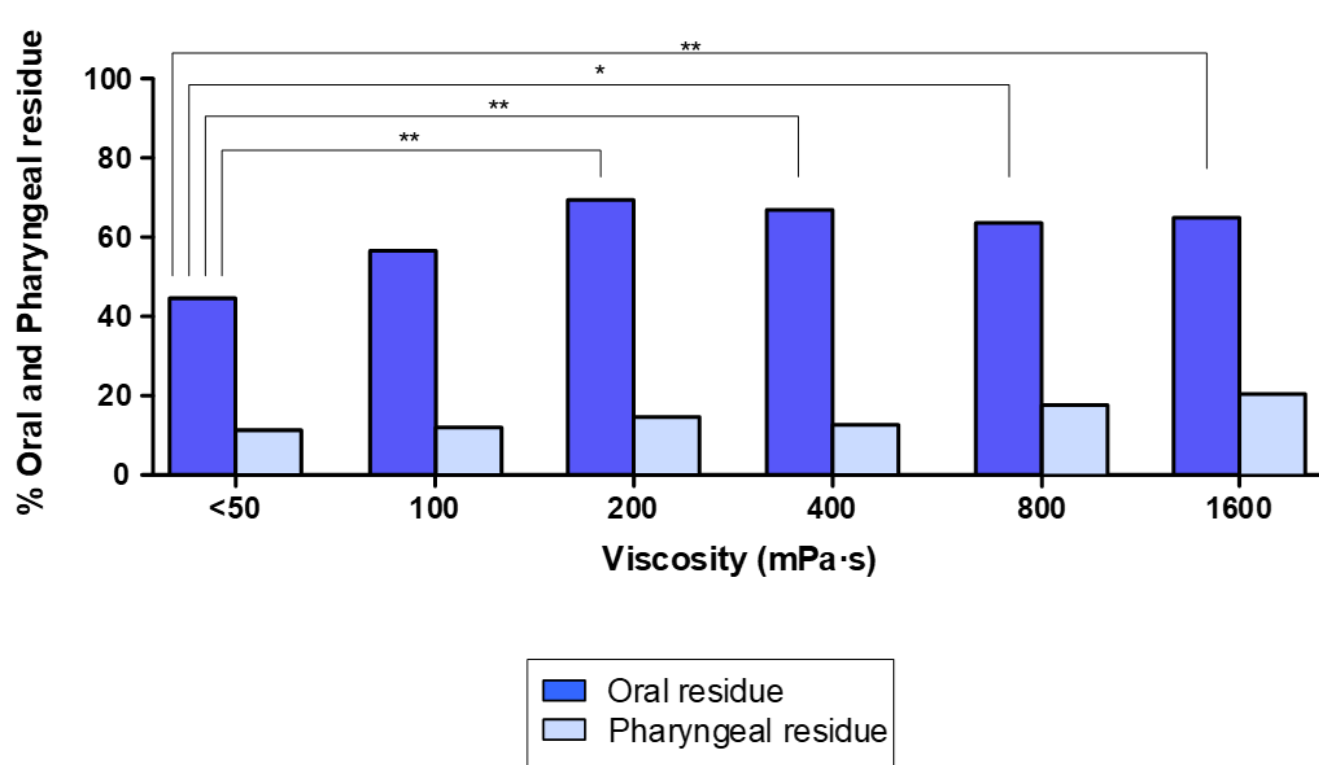
Dose – response effect on safety of swallow

Therapeutic range: 100 - 800 mPa·s  
Optimal Doses: 200 and 800 mPa·s



## Therapeutic effect

*Oral and pharyngeal residue*



# What is a thick purée?







*nutrients*



*Article*

## Measuring the Rheological and Textural Properties of Thick Purees Used to Manage Patients with Swallowing Disorders

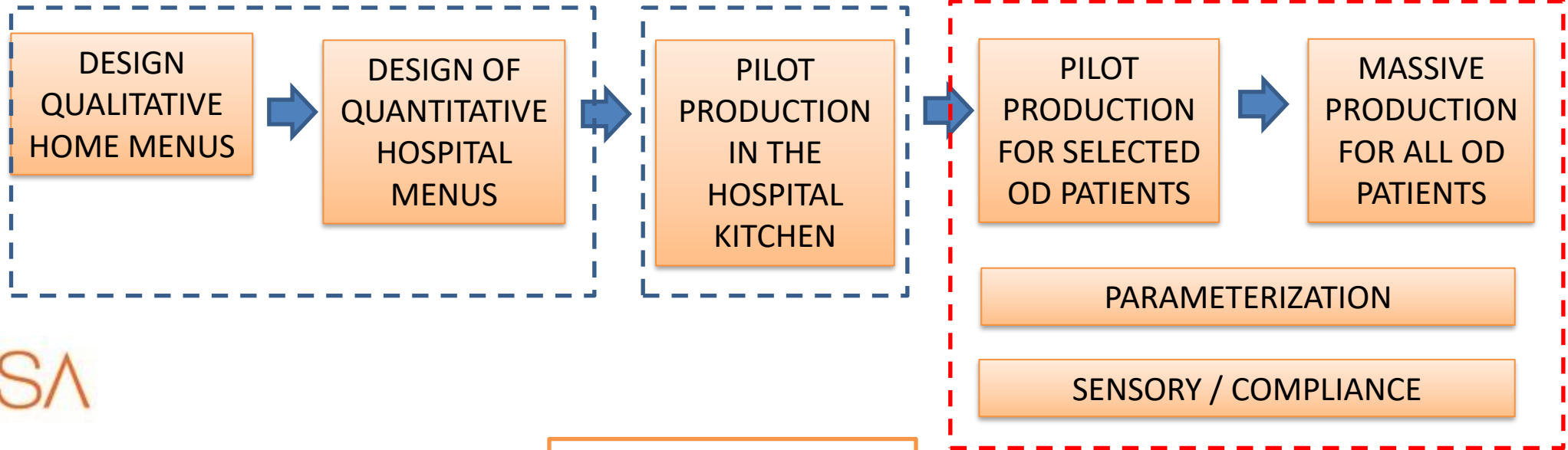
Kovan Ismael-Mohammed <sup>1,2</sup>, Mireia Bolivar-Prados <sup>1,3</sup>, Laura Laguna <sup>2</sup> and Pere Clavé <sup>1,3,\*</sup>

- a) to assess the **rheological** (viscosity, mPa·s) and **textural properties** (maximum force N, cohesiveness, and adhesiveness N·s) of **ten thick purees** (Texture C, BDA) in a hospital setting destined for patients with swallowing and mastication disorders
- b) to understand **the effect of oral processing** (OP) and the properties of the **ready-to-swallow bolus**





# Industrialization for Mataró Hospital



ARCASA

RECIPES / MENU / DIET DESIGN

INDUSTRIALIZATION +  
QUALITY CONTROL

STANDARD CLINICAL PRACTICE



# TEXTURE MODIFIED DIETS AT



HOSPITAL DE MATARÓ  
CONSORCI SANITARI DEL MARESME



CONSORCI SANITARI  
DEL MARESME



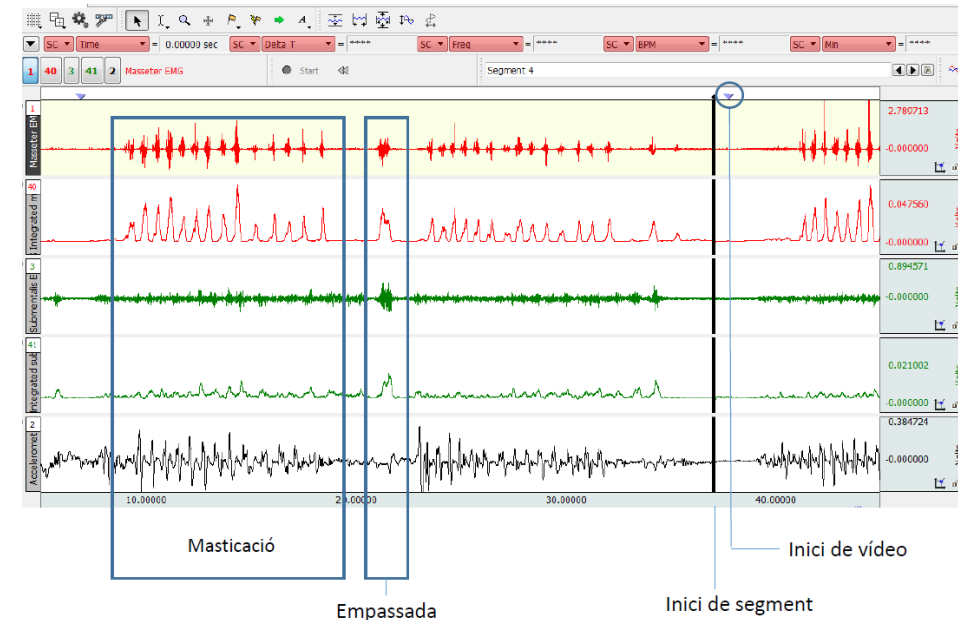
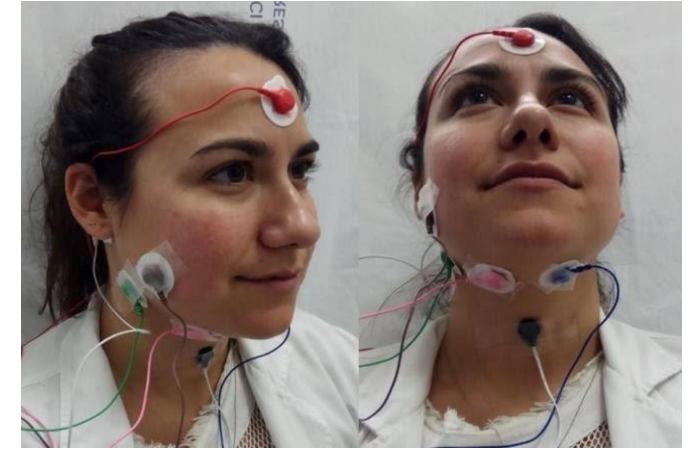
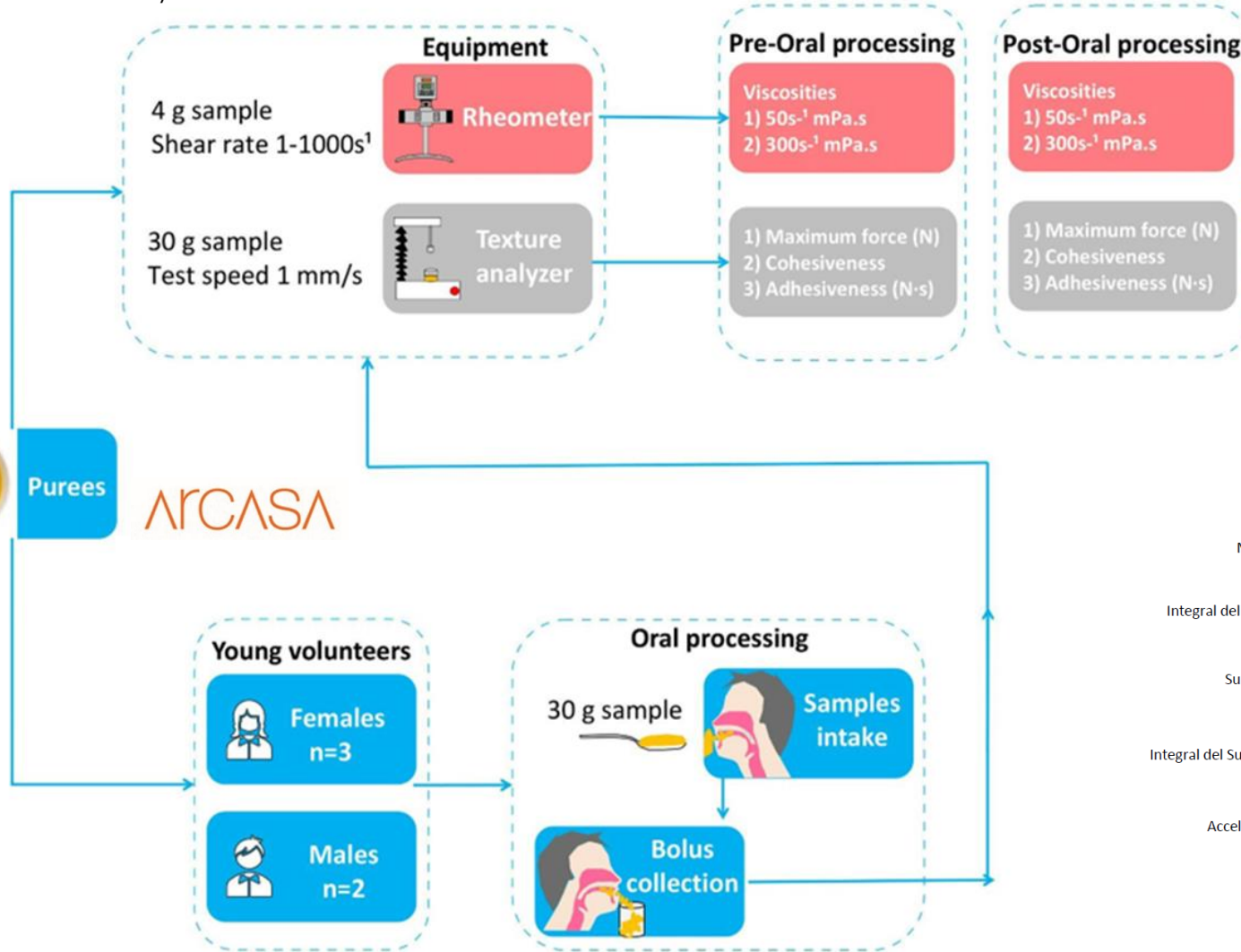
**C**  
THICK  
PUREE

**E**  
FORK-  
MASHABLE

# QUALITY CONTROL OF TEXTURE MODIFIED DIETS

EC CSdM 63/22

Parameters obtained



# **EFFECT OF A MINIMAL-MASSIVE INTERVENTION IN HOSPITALIZED OLDER PATIENTS WITH OROPHARYNGEAL DYSPHAGIA: A PROOF OF CONCEPT STUDY**

A. MARTÍN<sup>1</sup>, O. ORTEGA<sup>1,2</sup>, M. ROCA<sup>3</sup>, M. ARÚS<sup>3</sup>, P. CLAVÉ<sup>1,2,4</sup>

## **1. Adaptation of fluids according to the V-VST results (nurse)**

- Volume (5, 10 or 20mL) and viscosity

## **2. Nutritional adaptation / support according to the MNA-sf (nutritionist)**

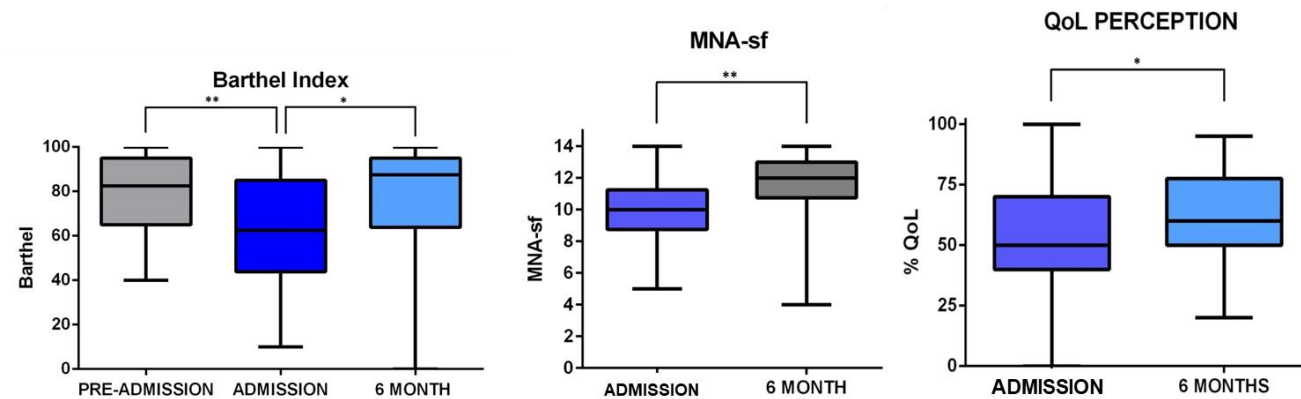
- Texture / calories- proteins nutritional supplements / **Triple adaptation of TMF**

## **3. Oral hygiene (nurse/dentist)**

- Modified Bass technique / oral mouthwashes chlorhexidine 2%

# CLINICAL OUTCOME. MINIMAL MASSIVE INTERVENTION

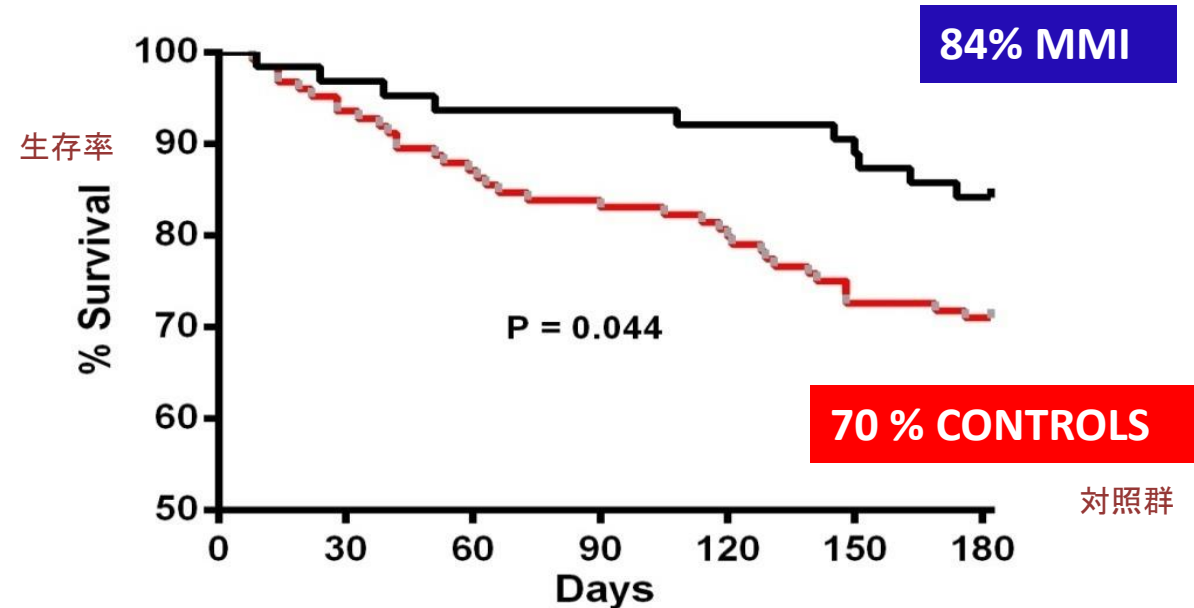
## INTERVENTION GROUP



- **MMI might become a new simple and cost-effective strategy to avoid OD complications in the geriatric population admitted with an acute disease to a general hospital.**

Martínez A, Clavé P. JNHA, 2018

## Survival at six months



	INTERVENTION GROUP	CONTROL GROUP	P-value
Readmissions (%)	15.63	33.87	0.0449
LRTI (%)	6.67	23.39	0.0441
Pneumonia (%)	6.67	5.64	1.000
Emergency visit (%)	18.75	14.52	0.5851

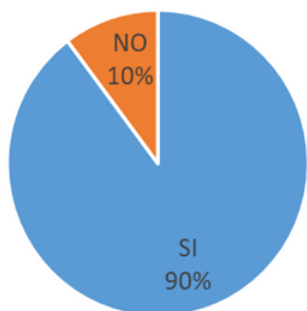




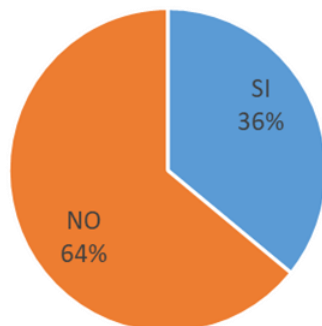
## ENCUESTA 40 HOSPITALES CATALUNYA EQUIDAD Y CALIDAD ASISTENCIAL



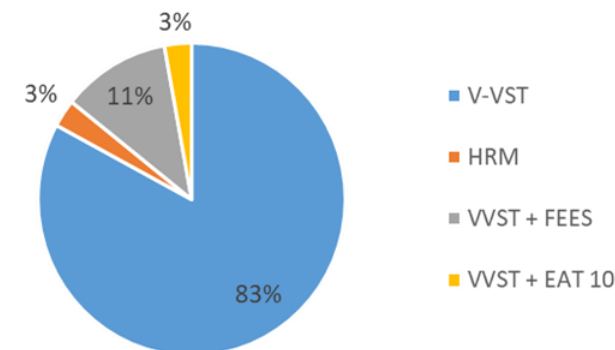
Se realiza en tu hospital la valoración clínica de la disfagia?



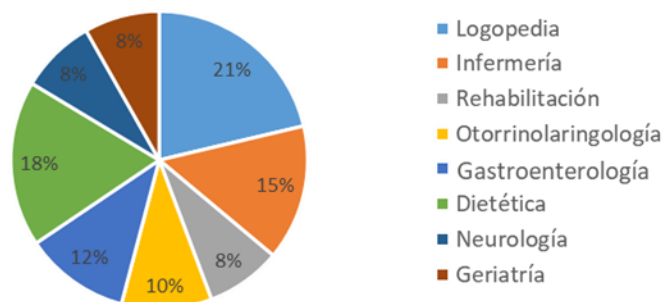
Existe en su centro una unidad específica para el manejo de la DO?



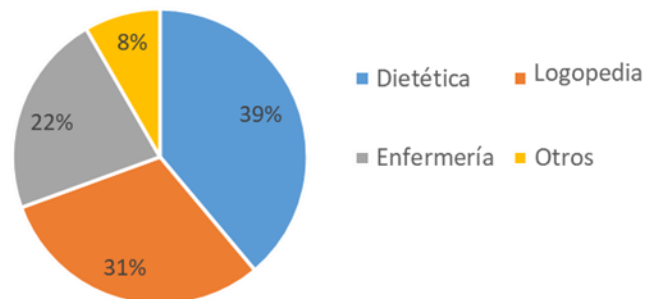
Qué método de exploración clínica se utiliza?



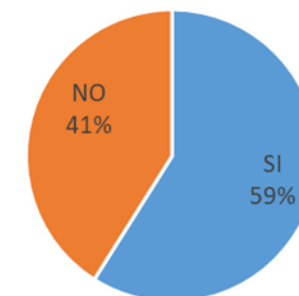
Qué integrantes tienen los equipos especializados que atienden DO?



Quién gestiona el tratamiento con medidas compensadoras (espesantes o dietas de textura modificada)?



En su centro disponen de cursos de formación para el manejo clínico de la DO para profesionales?



# PROYECTOS TRANSFORMADORES DEL SISTEMA SANITARIO INTEGRAL DE UTILIZACIÓN PÚBLICA, IMPULSADOS POR EL SERVEI CATALÀ DE LA SALUT INEXES-CSC



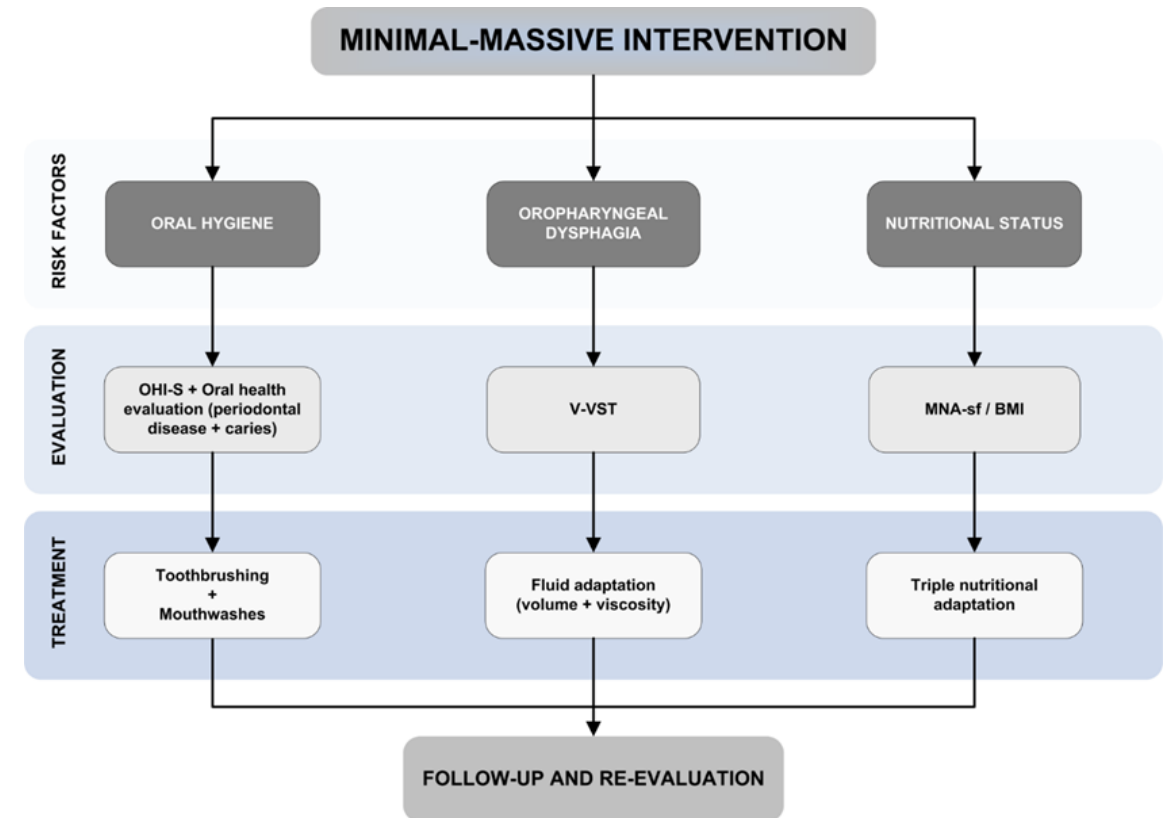
CENTROS	HOSPITALES DE AGUDOS	ATENCIÓN PRIMARIA	AREA INFLUENCIA
<b>EJECUTORES</b>			
CSdM	Hospital de Mataró	3 centres	275.422 persones
- <u>Participantes</u> : FSCdM, Furega, AIMS-Medical			
<b>COLABORADORES</b>			
BSA	Hospital municipal Badalona	7 centres	334.931 persones
CSMS	Hospital de Calella-Blanes	3 centres	284.621 persones
SSIBE	Hospital Palamòs	4 centres	94.858 persones
CHV	Hospital de Vic	2 centres	164.343 persones
		<b>TOTAL</b>	<b>1.154.175 persones</b>



CSdM: Consorci Sanitari del Maresme; FSCdM: Fundació Salut del CSdM; BSA: Badalona Serveis Assistencials; CSMS: Consorci Sanitari del Maresme i la Selva; SSIBE: Serveis de Salut Integrats del Baix Empordà; CHV: Consorci Hospitalari de Vic

# LA PROPUESTA TRANSFORMADORA iNEXES-CSC CatSalut

- 1) Formación en Disfagia, Teórica y Práctica del Equipo transdisciplinar DO en cada centro.
- 2) Cribado Universal AIMS-OD + MECV-V
- 3) Intervención Mínima-Masiva
- 4) Triple adaptación Dieta Mediterránea
- 5) Empoderamiento de Pacientes y Cuidadores



---

## MÓDULO 1: INTRODUCCIÓN DEL CURSO. GENERALIDADES, CONSECUENCIAS CLÍNICAS Y ECONÓMICAS DE LA DISFAGIA OROFARÍNGEA.

Generalidades de la disfagia.  
Health economics.

## MÓDULO 2: DIAGNÓSTICO Y TRATAMIENTO DE LA DO. STATE OF THE ART.

Algoritmo diagnóstico. Interpretación del Cribaje y MECV-V  
Tratamiento compensador y rehabilitador.

## MÓDULO 3: IMPORTANCIA DEL ESTADO NUTRICIONAL y DE LA SALUD ORAL EN PACIENTES CON DO

Importancia de la higiene oral en pacientes con disfagia (evaluación y tratamiento).  
Importancia del estado nutricional y la hidratación en pacientes con DO (cribado, diagnóstico clínico y tratamiento).

## MÓDULO 4: NUEVO PARADIGMA DE INTERVENCIÓN MULTIMODAL EN PACIENTES CON DO

Equipo multidisciplinar en el abordaje del paciente con disfagia.  
Intervención Mínima-Masiva / Optima Masiva.  
Información y materiales para pacientes y cuidadores informales.

- Talleres preparació viscosidades y texturas
- Talleres para cocineros hospital/residencia



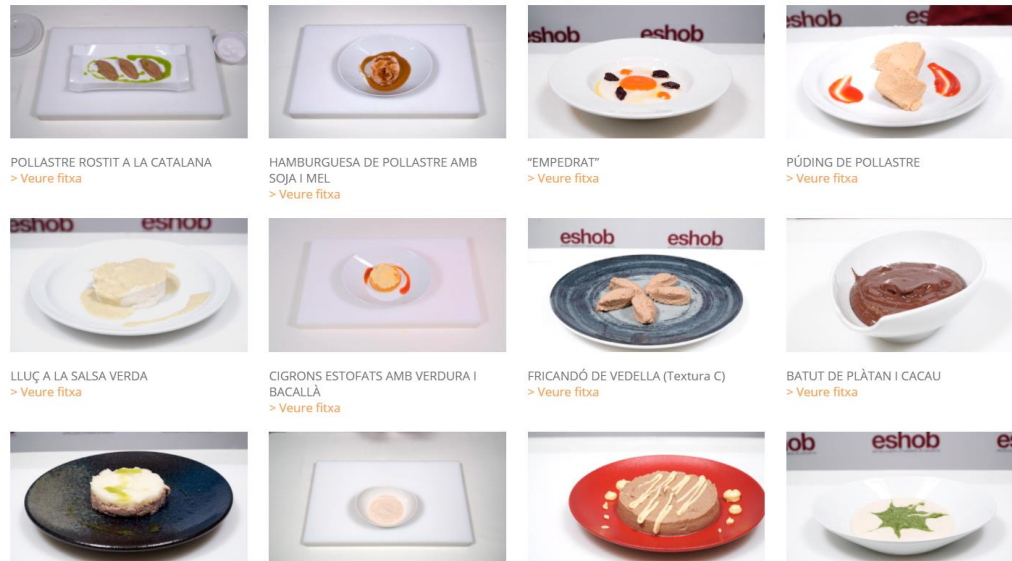
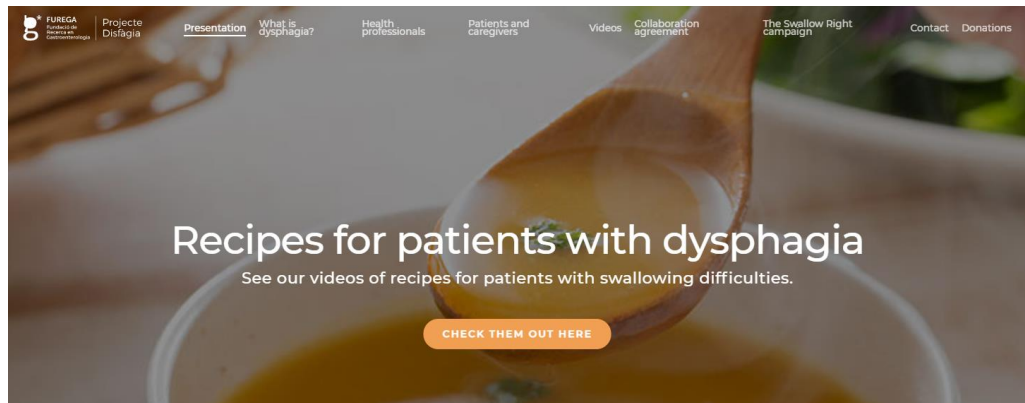
# Texture Modified Food Recipes for patients

- 90 video clips with recipes for menus with triple adaptation.
- 2 adaptations of caloric and protein content according to MNA.
- 2 adaptations of texture according to chewing and swallow function (VVST).
- 2 sets of menus with Mediterranean diet for summer / winter



300 Online recipes and menus for patients, caregivers, and families. <http://furega.com/> Password: DS1849

Education. Cooking Workshop for patients and families.











- La **disfagia orofaríngea** es un síndrome geriátrico con **dimensiones de pandemia** que afecta al **50% de personas mayores** y pacientes con enfermedades neurológicas o neurodegenerativas.
- La DO ocasiona severas **complicaciones nutricionales, respiratorias, empeora la salud i la QoL** de los pacientes lo que a su vez causan un **elevado costo social y sanitario**.
- **La DO está reconocida por la OMS. Los pacientes tienen el derecho** a un diagnóstico y tratamiento apropiados, y **las organizaciones sociales y sanitarias la obligación y el reto de proporcionarlos**.
- El **programa de Innovación Asistencial I-NEXES CatSalut** permite el **diagnóstico y tratamiento universal de los pacientes mayores ingresados en centros sociales, sanitarios en riesgo de DO**. Incluye la formación, participación y empoderamiento de sanitarios, cuidadores y pacientes.
- Emerge **nuevo concepto de seguridad alimentaria** para el sistema social y de salud, y para las compañías nutricionales y de catering social y sanitario, ya que deben proporcionar **alimentos seguros y bebidas seguras para los pacientes mayores con DO**.

# Master and Postgraduate Diploma on Swallowing Disorders FSCSdM-UAB

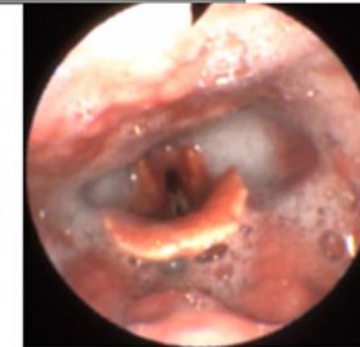
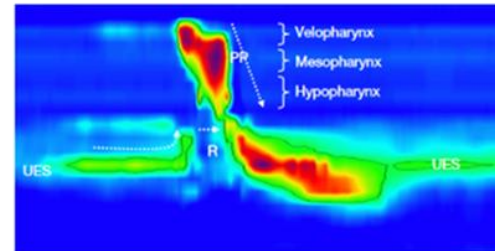
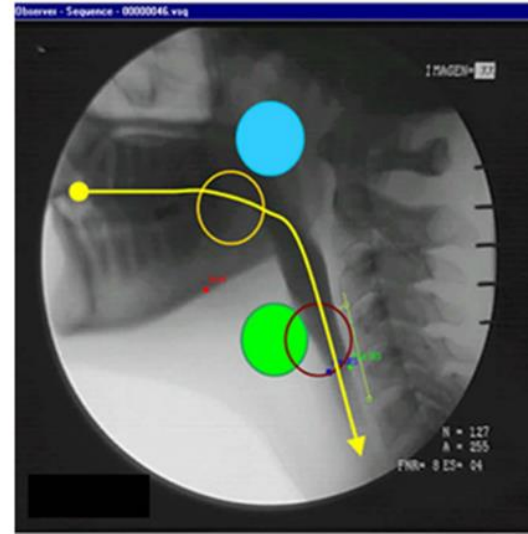
**UAB**  
Universitat Autònoma  
de Barcelona



**HOSPITAL DE MATARÓ**  
CONSORCI SANITARI DEL MARESME



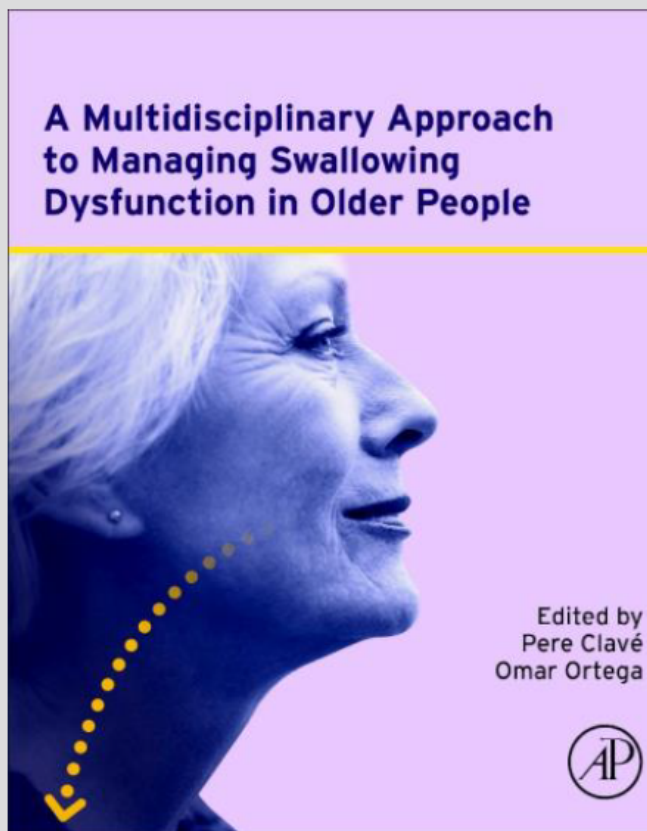
**FUNDACIÓ SALUT**  
CONSORCI SANITARI DEL MARESME



INFORMATION ON 2023-2024 COURSE  
[office@dysphagiamasters.org](mailto:office@dysphagiamasters.org)

[www.dysphagiamasters.org](http://www.dysphagiamasters.org)

# Textbook



## A Multidisciplinary Approach to Managing Swallowing Dysfunction in Older People

**Prof. Pere Clavé** is a digestive surgeon, professor at the Universitat Autònoma de Barcelona (UAB), Director of Research and Innovation at the Consorci Sanitari del Maresme and principal investigator of the CIBERehd (Centro de Investigación Biomédica en Red en Enfermedades Hepáticas y Digestivas, Instituto de Salud Carlos III) group on Gastrointestinal Physiology.

**Dr. Omar Ortega** is a postdoctoral researcher at Hospital de Mataró (Fundació Salut del Consorci Sanitari del Maresme) and affiliate partner of CIBERehd (Centro de Investigación Biomédica en Red en Enfermedades Hepáticas y Digestivas, Instituto de Salud Carlos III).



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