



UNIVERSIDAD  
DE LA REPÚBLICA  
URUGUAY

# ¿CÓMO LEER DE FORMA CRÍTICA UN ARTÍCULO CIENTÍFICO?

ACTIVIDAD INTRODUCTORIA - ABRIL 2026

UNIDAD ACADÉMICA CLÍNICA MÉDICA B - PROF. DRA. LAURA LLAMBÍ

Dras. Paula Márquez - Kihara Rodríguez

# ¿POR QUÉ ES IMPORTANTE?

En la práctica clínica surgen preguntas cuyas respuestas deben ser resueltas basándonos en literatura confiable, con evidencia científica de calidad.

La lectura crítica permite verificar la validez y aplicabilidad de los resultados publicados.

## MEDICINA BASADA EN LA EVIDENCIA

“ utilización consciente, explícita y juiciosa de la mejor evidencia científica crítica disponible para tomar decisiones sobre el cuidado de cada paciente”

*‘Evidence-based medicine is the use of mathematical estimates of the risk of benefit and harm, derived from high-quality research on population samples, to inform clinical decision-making in the diagnosis, investigation or management of individual patients.’*

# ¿QUÉ SUCEDÍA PREVIAMENTE?

**Table 1.1** Examples of harmful practices once strongly supported by 'expert opinion'

Approximate time period	Clinical practice accepted by experts of the day	Practice shown to be harmful in	Impact on clinical practice
From 500 bc	Blood letting (for just about any acute illness)	1820*	Blood letting ceased around 1910
1957	Thalidomide for 'morning sickness' in early pregnancy, which led to the birth of over 8000 severely malformed babies worldwide	1960	The teratogenic effects of this drug were so dramatic that thalidomide was rapidly withdrawn when the first case report appeared
From at least 1900	Bed rest for acute low back pain	1986	Many doctors still advise people with back pain to 'rest up'
1960s	Benzodiazepines (e.g. diazepam) for mild anxiety and insomnia, initially marketed as 'non-addictive' but subsequently shown to cause severe dependence and withdrawal symptoms	1975	Benzodiazepine prescribing for these indications fell in the 1990s
1970s	Intravenous lignocaine in acute myocardial infarction, with a view to preventing arrhythmias, subsequently shown to have no overall benefit and in some cases to <i>cause</i> fatal arrhythmias	1974	Lignocaine continued to be given routinely until the mid 1980s
Late 1990s	Cox-2 inhibitors (a new class of non-steroidal anti-inflammatory drug), introduced for the treatment of arthritis, were later shown to increase the risk of heart attack and stroke	2004	Cox-2 inhibitors for pain were quickly withdrawn following some high-profile legal cases in the USA, though new uses for cancer treatment (where risks may be outweighed by benefits) are now being explored

# ¿CUÁL ES LA SITUACIÓN ACTUAL?

The screenshot shows a PubMed search interface. At the top left is the PubMed logo. The search bar contains the text "wernicke encephalopathy AND thiamine". To the right of the search bar are buttons for "Advanced", "Create alert", "Create RSS", and "Search". Below the search bar are buttons for "Save", "Email", "Send to", "Sort by: Most recent", and "Display options".

On the left side, there is a section titled "MY CUSTOM FILTERS" with a link "Edit custom filters". Below that is a section titled "RESULTS BY YEAR" with a bar chart showing the number of results from 1950 to 2026. The chart shows a significant increase in results starting around 2010, reaching a peak in 2026.

The main search results area shows "1,603 results" and a pagination control indicating "Page 1 of 161". The first result is:

- Thiamine Deficiency in a Patient with Gastric Adenocarcinoma: A Case Report.**  
1 Al-Bitar A, Kouli A, Almosli H, Baghdan C, Khazeam N.  
Cite Case Rep Oncol. 2026 Feb 7;19(1):444-449. doi: 10.1159/000550936. eCollection 2026 Jan-Dec.  
PMID: 41953850 **Free PMC article.**  
While commonly associated with **Wernicke encephalopathy** (WE), its subclinical form often precedes overt neurological symptoms. ...Informed by a family history of malignancy with neuropsychiatric symptoms, serum **thiamine** was tested and revealed severe deficienc ...

LA EVIDENCIA DISPONIBLE CRECE DE FORMA EXPONENCIAL

# MEDICINA BASADA EN LA EVIDENCIA EN LA ERA DE LA INTELIGENCIA ARTIFICIAL

En los últimos años el uso de la inteligencia artificial se ha impuesto en la práctica clínica, la investigación y la docencia.

- IA discriminativa: realiza funciones de clasificación y predicción mediante la identificación de patrones.
- IA generativa (chatbots): permite crear hipótesis en base a la información disponible.

La información generada por IA requiere el desarrollo de herramientas que permitan establecer controles de calidad, para evaluar de forma crítica su aplicación: CONSORT AI, SPIRIT-AI, CHART.

# Development and Validation of a Deep Learning Algorithm for Detection of Diabetic Retinopathy in Retinal Fundus Photographs

Varun Gulshan, PhD<sup>1</sup>; Lily Peng, MD, PhD<sup>1</sup>; Marc Coram, PhD<sup>1</sup>; [et al](#)

» [Author Affiliations](#) | [Article Information](#)

[“](#) Cite [C](#) Permissions [↗](#) Metrics

JAMA

Published Online: December 13, 2016

2016;316;(22):2402-2410.

doi:10.1001/jama.2016.17216

## Users' Guides to the Medical Literature

# How to Read Articles That Use Machine Learning

## Users' Guides to the Medical Literature

Yun Liu, PhD<sup>1</sup>; Po-Hsuan Cameron Chen, PhD<sup>1</sup>; Jonathan Krause, PhD<sup>1</sup>; [et al](#)

» [Author Affiliations](#) | [Article Information](#)

[“](#) Cite [C](#) Permissions [↗](#) Metrics

JAMA

Published Online: November 12, 2019

2019;322;(18):1806-1816.

doi:10.1001/jama.2019.16489

Methods		
Model identifiers	3a	State the name and version identifier(s) of the generative AI model(s) and chatbot(s) under evaluation, as well as their date of release or last update.
	3b	State whether the generative AI model(s) and chatbot(s) are open-source or closed-source/proprietary.
Model details	4a	State whether the generative AI model was a base model or a novel base model, tuned model, or fine-tuned model.
	4b	If a base model is used, cite its development in sufficient detail to identify the model.
	4c	If a novel base model, tuned model, or fine-tuned model is used, describe the pre- and/or postimplementation/deployment data and parameters.
Prompt engineering	5a	Describe the evolution of study prompt development.
	5ai	Describe the sources of prompts.
	5aii	State the number and characteristics of the individual(s) involved in prompt engineering.
	5aiii	Provide details of any patient and public involvement during prompt engineering.
	5b	Provide study prompts.
Query strategy	6a	State route of access to generative AI model.
	6b	State the date(s) and location(s) of queries for the generative AI-driven chatbot(s) including the day, month, and year as well as city.

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# ¿QUÉ IMPLICA LEER UN ARTÍCULO DE FORMA CRÍTICA?

“Una mirada crítica a un artículo científico de interés presupone comprobar la validez y nivel de aplicabilidad de las evidencias que este aporta, para así poder emplearlas de forma particular en la asistencia...”

## PASOS

1. Identificar el problema que queremos responder
2. Localizar la mejor evidencia en la literatura científica
3. Lectura crítica de artículos seleccionados
4. Aplicar los resultados a la práctica clínica
5. Evaluar los resultados

# PASO 1: IDENTIFICAR EL PROBLEMA QUE QUEREMOS RESPONDER

## PREGUNTA PICO

P: población objetivo

I: intervención

C: comparación

O: outcome

¿Cuál es la diferencia en el **descenso de peso** obtenido en **pacientes con IMC >35** tratados con **agonistas GLP-1** comparado con los que se someten a una **cirugía bariátrica**?

---

# PASO 2: LOCALIZAR LA MEJOR EVIDENCIA EN LA LITERATURA CIENTÍFICA

## ¿Cómo realizar búsquedas bibliográficas?

- Bases de datos: internacionales, regionales, nacionales
  - Palabras clave
  - Términos MeSH
  - Comandos booleanos: AND, OR, NOT
-

PubMed®

Advanced

PubMed® comprises more than 40 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full text content from PubMed Central and publisher web sites.

 **LILACS**  
Literatura Latinoamericana y del Caribe en Ciencias de la Salud

Home ES Sobre- Rede LILACS- Revistas- Indicadores Indicadores

### Conectando saberes, fortaleciendo la ciencia en salud con identidad de América Latina y el Caribe

Acceso a la producción en salud que expresa el contexto regional y apoya mejores decisiones en salud

  
Búsqueda avanzada Búsqueda con DeCS/MeSH Como buscar

 **Cochrane Library** Trusted evidence. Informed decisions. Better health.

Review language : English Website language : English Sign In

Title Abstract Keyword  🔍

Browse Advanced search

**timbó**

Buscar por DOI, ISBN, ISSN, título, tema, palabras clave o autor. PRESIONE ENTER

Colecciones de subscripción Colecciones de acceso abierto Colecciones nacionales



Scientific Electronic Library Online



MeSH

MeSH

kidney failure

Create alert Limits Advanced

Summary

Send to:

### Search results

Items: 4

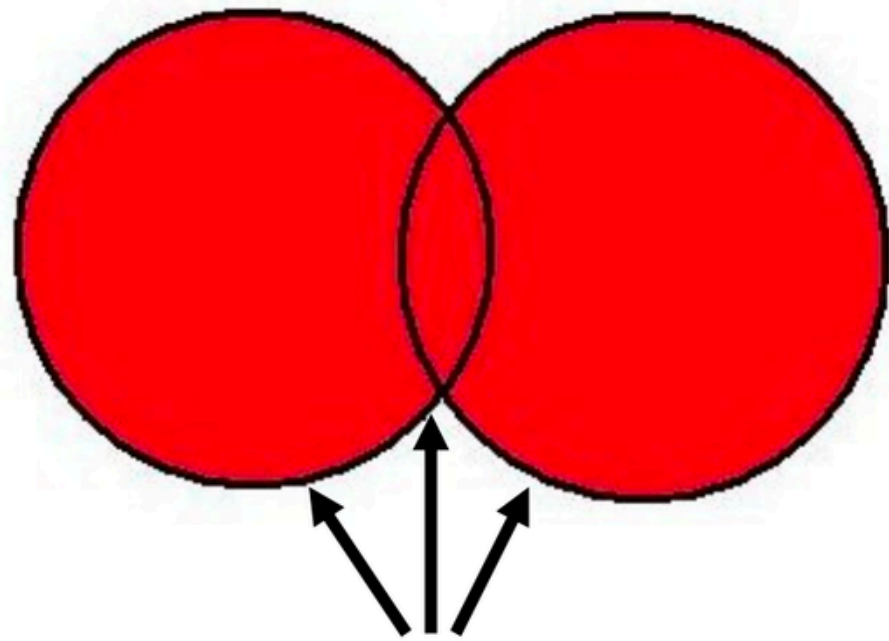
[Renal Insufficiency](#)

1. Conditions in which the KIDNEYS perform below the normal level in the ability to remove wastes, concentrate URINE, and maintain ELECTROLYTE BALANCE; BLOOD PRESSURE; and CALCIUM metabolism. **Renal insufficiency** can be classified by the degree of kidney damage (as measured by the level of PROTEINURIA) and reduction in GLOMERULAR FILTRATION RATE.

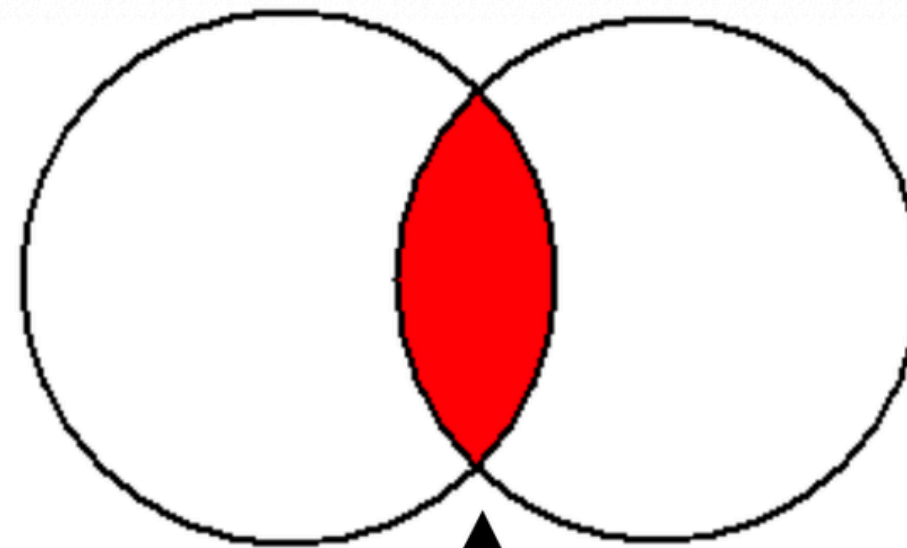
Year introduced: 2006

Fever

Hyperthermia



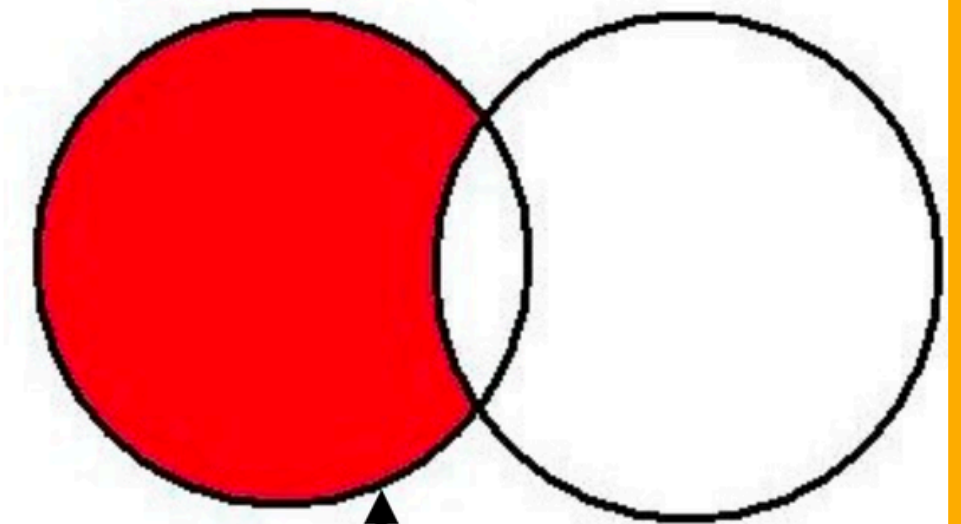
Fever **OR** Hyperthermia



'Rheumatic diseases' **AND** Pregnancy

Hypertension

Pulmonary



Hypertension **NOT** Pulmonary

# REVISTAS CIENTÍFICO ACADÉMICAS

- Doble revisión: editorial y peer review.
- Disponibles en bases de datos reconocidas.
- Factor de impacto >3

## New England Journal Of Medicine

ISSN: 0028-4793 • JCR: NEW ENGL J MED • Massachusetts Medical Society • United States

[Visit Journal Homepage](#)

**78.5**

2025 IMPACT FACTOR

**84.9**

5-YEAR IMPACT FACTOR

**Q1**

JCR QUARTILE

**B1**

CAS BLOCK

## Revista Medica Del Uruguay

ISSN: 0303-3295 • JCR: REV MED URUG • UY

[Visit Journal Homepage](#)

**0.1**

2025 IMPACT FACTOR

**0.2**

5-YEAR IMPACT FACTOR

**Q4**

JCR QUARTILE

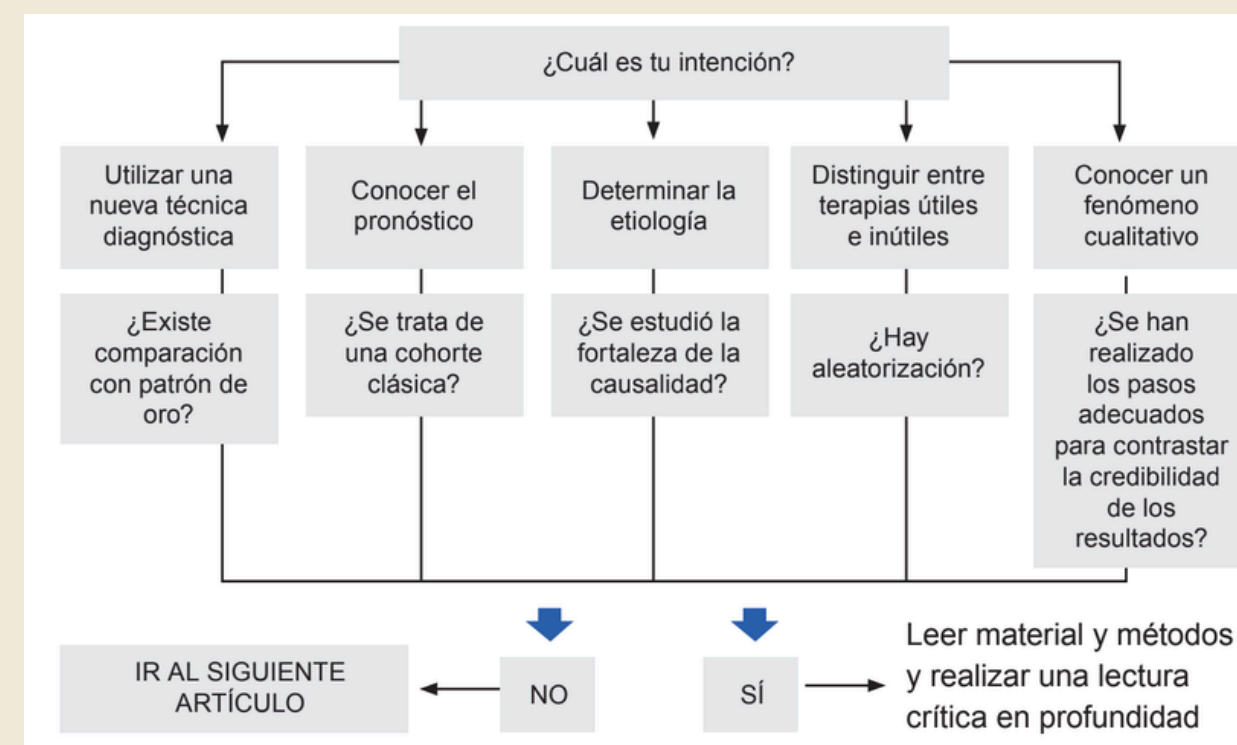
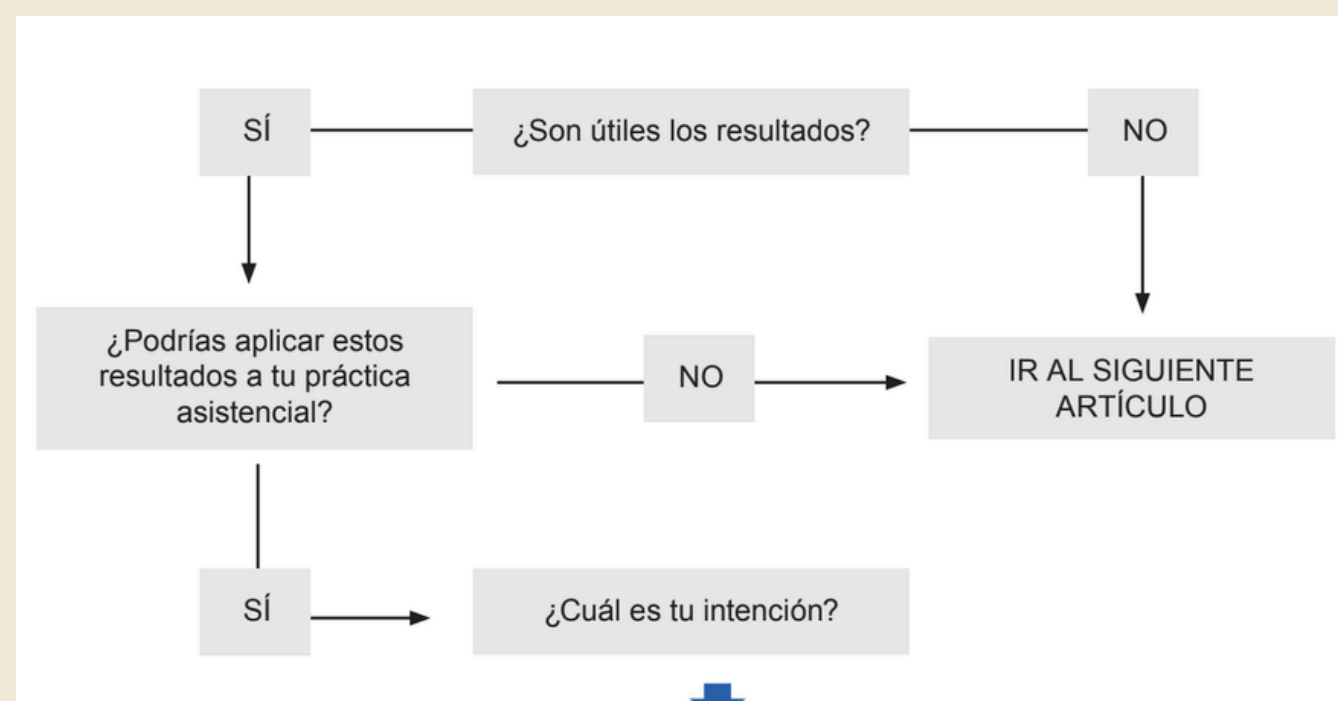
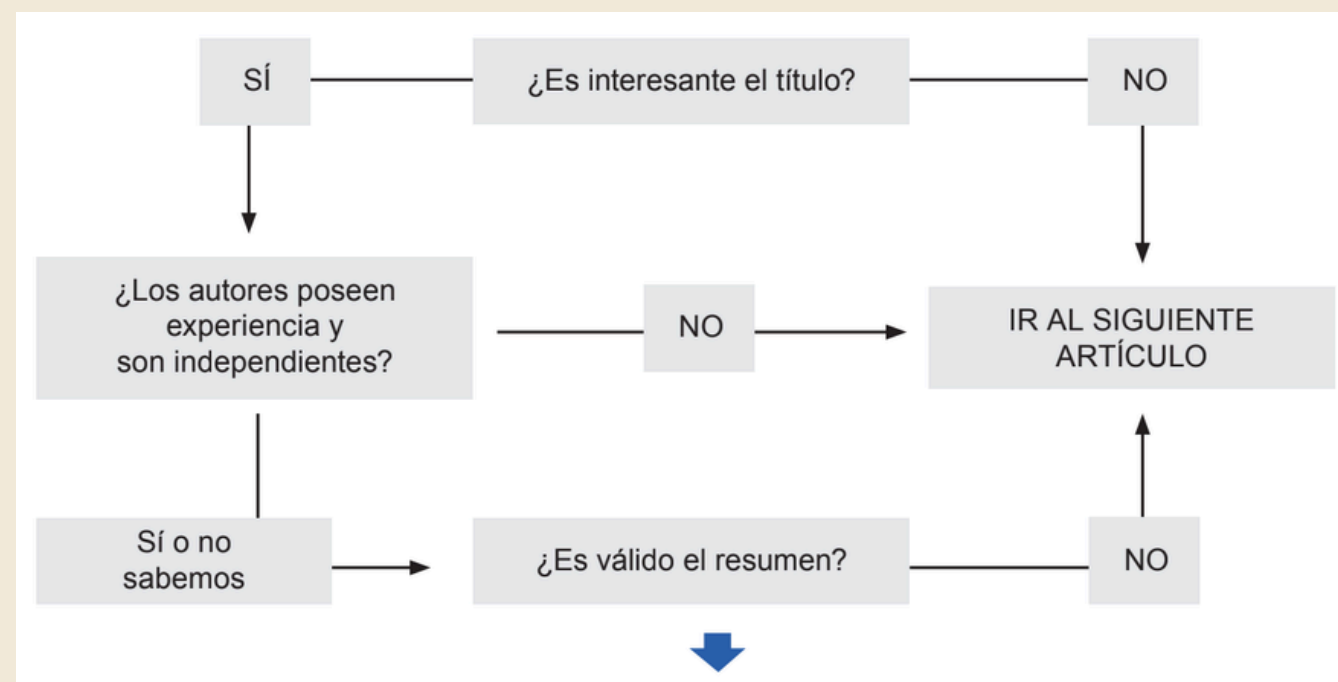
**N/A**

CAS BLOCK

**Nunca publiques aquí: qué son las revistas depredadoras y cómo identificarlas**

# PASO 3: LECTURA CRÍTICA DE LOS ARTÍCULOS SELECCIONADOS

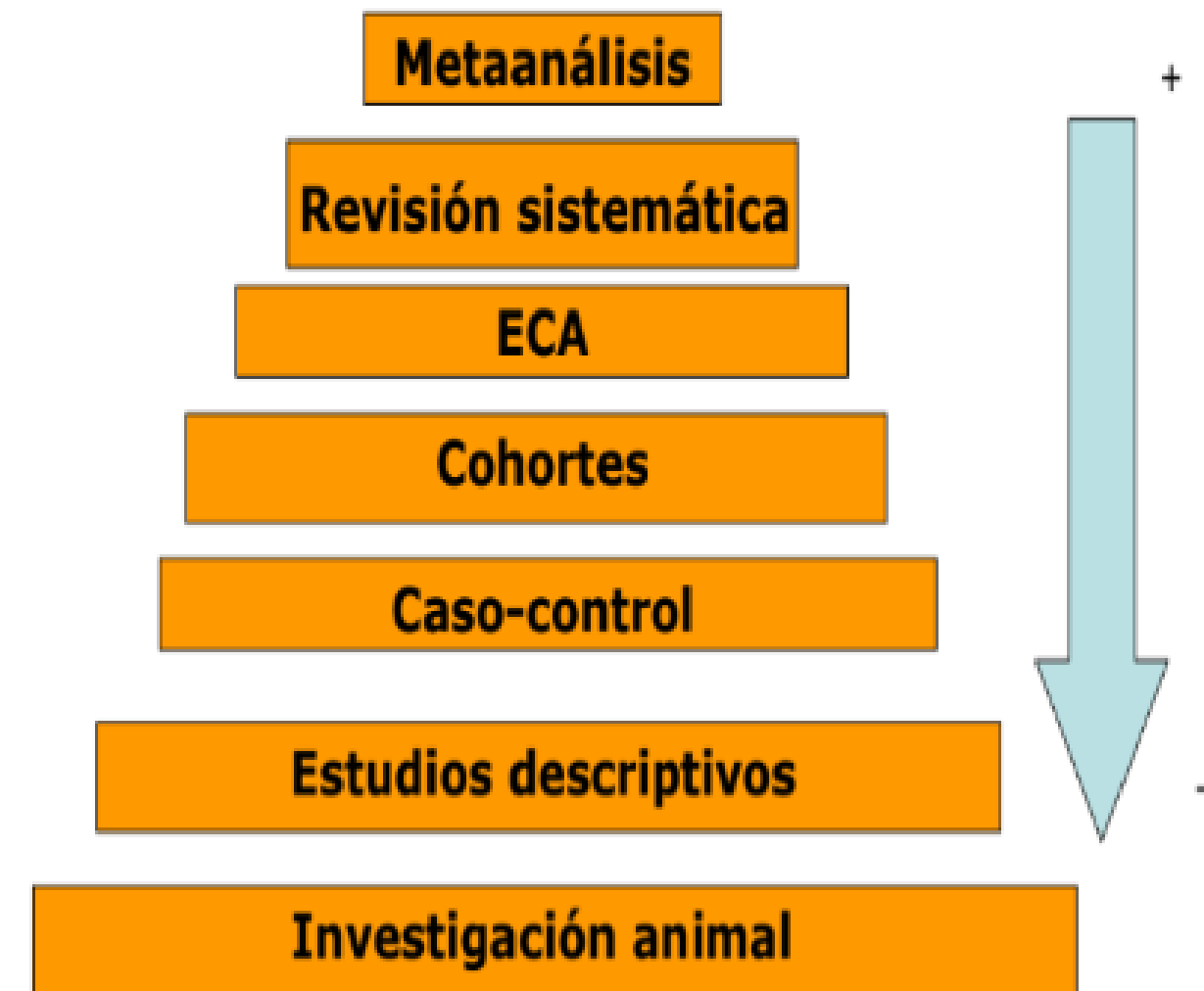
- Título
- Resumen
- Introducción y justificación del trabajo
- Materiales y métodos
- Resultados
- Discusión
- Conclusiones
- Conflictos de interés
- Referencias bibliográficas



# TIPOS DE ARTÍCULOS

- Artículos de investigación original
- Revisiones sistemáticas y narrativas
- Reporte de casos y series de casos
- Cartas al editor
- Editoriales
- Artículos de opinión
- Protocolos

## PIRAMIDE DE LA EVIDENCIA



# AUTORES

- Todos deben realizar una contribución intelectual significativa en el proceso de investigación.
- Autores principales con experiencia en el área.

## Obesity and asthma: obesity causes and aggravates asthma across the entire type-2 inflammation spectrum

Sebastian Riemann  | Imke Matthys | Tania Maes | Bruno Lapauw | Guy Brusselle  See Less ^

European Respiratory Journal 2026 2502687; DOI: <https://doi.org/10.1183/13993003.02687-2025>

About

433 Publications	79,939 Reads ⓘ	21,941 Citations
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# RESUMEN

- Tarjeta de presentación del artículo al lector.
- Extensión 150-250 palabras.
- Claro, conciso, presenta ideas más importantes del artículo.

2 tipos: estructurado, **narrativo**



## Obesity and asthma: obesity causes and aggravates asthma across the entire type-2 inflammation spectrum


Sebastian Riemann  | Imke Matthys | Tania Maes [Show More](#) 

European Respiratory Journal 2026 2502687; DOI: <https://doi.org/10.1183/13993003.02687-2025>

### Abstract

Obesity affects more than 650 million adults worldwide, with prevalence continuing to rise across all age groups and continents. This trend has important implications for asthma: individuals with obesity have a 30–50% higher risk of developing asthma, and obesity is highly prevalent among people with established disease. Mean Body Mass Index (BMI) in clinical trials and registries of adults with asthma consistently ranges from 28–30 kg·m<sup>-2</sup>, with up to 70% of patients being overweight or obese. These numbers highlight obesity as one of the most common comorbidities in asthma, consistently associated with poorer asthma control and a higher risk of exacerbations. Although obesity-associated asthma is often described as Type-2 (T2)-low phenotype, it is increasingly recognized as a heterogeneous condition not restricted to a single phenotype. Excess adiposity influences asthma through multiple mechanisms, including dysregulated adipokine signaling, impaired ILC2-eosinophil-macrophage crosstalk in adipose tissue, systemic low-grade inflammation, metabolic dysfunction, and mechanical effects on lung volumes. This diversity complicates diagnosis, endotyping, and treatment stratification. Obesity should therefore be considered a treatable trait in asthma. Weight reduction - through lifestyle interventions, pharmacotherapy, or bariatric surgery - improves symptoms, lung function, and exacerbation risk across both T2-high and T2-low asthma. Importantly, patients with obesity experience similar reductions in exacerbations with anti-T2 biologics as their lean counterparts, though improvements in symptoms and lung function are variable. Future research should prioritize randomized, placebo-controlled trials evaluating GLP-1 and dual GLP-1/GIP-agonist therapies specifically in patients with asthma and obesity, and elucidate how obesity modifies inflammatory endotypes and treatment responses.

# Weight Loss Outcomes Between GLP-1 Receptor Agonists and Bariatric Surgery in Adults With Obesity: A Systematic Review, Meta-Analysis and Meta-Regression

[Muhammad Tahir](#), [Marium Ali Meghani](#), [Muhammad Salik Uddin](#), [Abbeha Talib](#), [Zainab Binte Ahmad](#), [Ammaar Ali Khan](#), [Muhammad Ahmed](#), [Lydia Dinsmore](#), [Abdul Nasser ...](#) [See all authors](#) 

First published: 23 March 2026 | <https://doi.org/10.1111/dom.70676> | [VIEW METRICS](#)

## Abstract

**Background:** The comparative effectiveness of bariatric surgery (BS) and glucagon-like peptide-1 receptor agonists (GLP-1 RAs) for weight loss among patients with obesity remains uncertain.

**Methods:** MEDLINE, EMBASE and CENTRAL were searched to 5 October 2025. Pooled mean differences (MDs) for change in weight, body mass index (BMI), glycaemic indices, lipid profile and blood pressure were calculated using random-effects models with heterogeneity quantified by  $I^2$ . Outcomes were assessed separately according to time duration. Meta-regression was performed for the primary outcome of change in BMI.

**Results:** Fifteen studies (20 594 participants) were included. Weight loss did not differ significantly at 6 months (MD -12.19 kg;  $p = 0.13$ ), but favoured BS at  $\leq 1$  year (MD -16.97 kg;  $p = 0.02$ ) and  $> 1$  year (MD -19.78 kg;  $p < 0.001$ ). BMI reduction consistently favoured BS at 6 months (MD -6.77 kg/m<sup>2</sup>;  $p = 0.02$ ),  $\leq 1$  year (MD -5.10 kg/m<sup>2</sup>;  $p < 0.001$ ) and  $> 1$  year (MD -6.61 kg/m<sup>2</sup>;  $p < 0.001$ ). HbA1c reduction was greater with BS beyond one year (MD -1.69%;  $p < 0.001$ ), and fasting glucose was lower overall with BS (MD -1.22 mmol/L;  $p = 0.03$ ). Serum lipids and blood pressure showed no significant between-group differences. Meta-regression demonstrated larger BMI reductions with BS in older patients, male patients and those with higher baseline BMI.

**Conclusion:** Although substantial heterogeneity was present, BS was associated with greater and sustained reductions observed over multi-year follow up in weight, BMI and glycaemic indices compared to GLP-1 RAs, with similar effects on serum lipids and blood pressure, supporting its use in appropriately selected adults with obesity.

**Keywords:** BMI reduction; GLP-1 RA; bariatric surgery; obesity; weight loss.

# INTRODUCCIÓN Y JUSTIFICACIÓN

- Transición entre el mundo del lector y el mundo del autor, explica conceptos básicos para la comprensión del tema.
- Da información sobre el estado del arte del problema.
- Define la pregunta de investigación.
- Identifica una brecha en el conocimiento científico. Responde al por qué y para qué de la investigación.
- Presenta el objetivo de forma clara al final del párrafo, en línea con la pregunta de investigación.

# Obesity Treatment With Bariatric Surgery vs GLP-1 Receptor Agonists

Tyson S. Barrett, PhD; Juliane O. Hafermann, PhD; Shannon Richards, MSN; Keith LeJeune, PhD; George M. Eid, MD

**W**orldwide, the number of people living with obesity has increased drastically in the last decades, reaching an estimated 1 billion people in 2022.<sup>1</sup> Obesity is a major risk factor for a range of conditions<sup>2</sup> and a chronic condition requiring long-term management.<sup>3,4</sup> Patients with class II (body mass index [BMI; calculated as weight in kilograms divided by height in meters squared]  $\geq 35$ ) and III (BMI  $\geq 40$ ) obesity are most at risk for poor health outcomes,<sup>5</sup> with large economic consequences for health care systems and society: the total medical costs related to obesity were \$260.6 billion in 2016.<sup>6</sup> Indirect costs of obesity caused by productivity loss due to premature mortality or absenteeism further increase the costs, which are only expected to increase in the future.<sup>7-9</sup> The high prevalence and adverse effects of obesity need to be addressed with prevention and treatment. Sustained, clinically meaningful weight loss contributes to a reduction in patient mortality,<sup>10</sup> remission of obesity-related conditions,<sup>11-13</sup> and decrease in cancers.<sup>14</sup>

conditions,<sup>11-13</sup> and decrease in cancers.<sup>14</sup>

The most effective treatment currently available for obesity is metabolic bariatric surgery (MBS),<sup>10-13,15,16</sup> which results in a durable loss of approximately 25% to 30% of total weight.<sup>17-21</sup> MBS is generally safe, with low complication and mortality rates,<sup>22</sup> and most patients experience treatment success after the first surgery.<sup>23</sup> Despite its success, MBS is considered a last resort when no other interventions achieve the therapeutic goals.<sup>4,15</sup> Recently, highly potent obesity management medications became available: glucagon-like peptide-1 receptor agonists (GLP-1 RAs), including liraglutide, semaglutide, and the dual glucose-dependent insulinotropic polypeptide/GLP-1 RA tirzepatide.<sup>24</sup> Semaglutide and tirzepatide in particular have shown promising outcomes, showing 18% to 25% total weight loss within 68 to 88 weeks of treatment.<sup>25,26</sup> As obesity is a chronic disease, maintenance of this weight loss is contingent on continued treatment with GLP-1 RAs; if the treatment is stopped, the lost weight is regained over time.<sup>25,26</sup>


Both MBS and GLP-1 RAs have demonstrated successful weight loss in obesity management and glycemic control.<sup>27</sup> They are also associated with substantial costs: MBS has high initial costs associated with the surgery, whereas GLP-1 RAs require recurrent payments to ensure ongoing medication. **We aimed to compare the ongoing long-term health care costs and utilization as well as the clinical outcomes of MBS and GLP-1 RAs.**

- No identifica clara brecha del conocimiento
- Objetivo poco claro



# Real-World Weight Loss Observed With Semaglutide and Tirzepatide in Patients with Overweight or Obesity and Without Type 2 Diabetes (SHAPE)

Carmen D. Ng · Victoria Divino · Julia Wang · Joshua C. Toliver · Marcio Buss



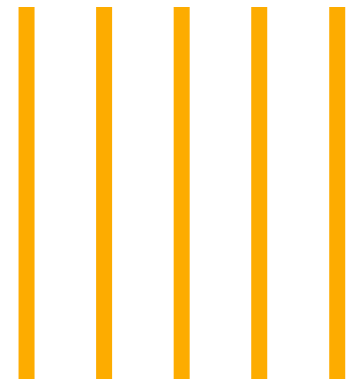
## INTRODUCTION

Obesity is a prevalent, chronic condition characterized by abnormal or excessive fat accumulation; individuals who have a body mass index (BMI) of  $\geq 30$  kg/m<sup>2</sup> are classified as having obesity [1]. This condition is a significant global public health issue, with an estimated prevalence that rose to 41.9% among adults in the US between 2017 and 2020 [2]. Obesity contributes to various medical conditions, such as type 2 diabetes mellitus (T2DM), hypertension, lipid disorders, cardiovascular disease, metabolic dysfunction–associated steatohepatitis,

gallbladder disease, osteoarthritis, and certain cancers [3–5]. Obesity-related comorbidities also lead to a substantial increase in US medical costs, with annual costs being \$2505 higher among adults with obesity compared with those with normal weight, which totals to an estimated \$260.6 billion in aggregated costs [3]. Obesity also confers a substantial mortality risk and contributed to > 10,200 deaths in the US in 2020 [6].

Management options for obesity include caloric restriction, behavioral modification, bariatric surgery, and medication [7]. The US Food and Drug Administration has approved several medications for obesity management, with clinical guidelines recommending pharmacologic treatment as a part of a comprehensive strategy for disease management among individuals with a BMI of 27–29.9 kg/m<sup>2</sup> and  $\geq 1$  obesity-related complication or with a BMI  $\geq 30$  kg/m<sup>2</sup> [8, 9]. Semaglutide 2.4 mg injection (Wegovy<sup>®</sup>, Novo Nordisk<sup>®</sup>), a glucagon-like peptide-1 (GLP-1) receptor agonist, was approved in June 2021 for chronic weight management in adults with overweight and  $\geq 1$  weight-related condition or obesity based on demonstrated weight reduction in clinical trials [10]. Additionally, tirzepatide, a dual glucose-dependent insulinotropic polypeptide and GLP-1 receptor agonist, was approved in May 2022 for adults with T2DM (Mounjaro<sup>®</sup>, Eli Lilly and Company) and in November 2023 for chronic weight management (Zepbound<sup>®</sup>, Eli Lilly and Company) [11, 12].

Given the relatively recent approval of semaglutide 2.4 mg and tirzepatide, real-world evidence on the effectiveness of these therapies for chronic weight management is limited. Therefore, the SHAPE study (Real-World Weight Loss Observed With Semaglutide and Tirzepatide in Patients with Overweight or Obesity And Without Type 2 Diabetes) aimed to evaluate the effectiveness of semaglutide 2.4 mg and tirzepatide in patients with overweight or obesity and without T2DM in routine clinical practice over a 1-year follow-up period.



# MATERIALES Y METÓDOS

- Diseño del estudio.
- Definición de variables.
- Población estudiada: criterios de inclusión y exclusión. Cálculo del tamaño muestral.
- Recolección de datos: aleatorización, tipo de muestreo, técnica de reclutamiento.
- Descripción de instrumentos y herramientas de medida utilizados (ej. cuestionarios)
- Análisis estadístico: adecuado para el diseño del estudio y variables utilizadas.
- Aspectos éticos: consentimiento informado, manejo de datos, aprobación por Comité de Ética.

**DESCRIPCIÓN DETALLADA DE CÓMO SE REALIZÓ EL ESTUDIO, DEBE SER REPRODUCIBLE POR OTROS INVESTIGADORES**

Directrices de presentación de informes para los principales tipos de estudios		
<a href="#">Ensayos aleatorios</a>	<a href="#">CONSORT</a>	<a href="#">Extensions</a>
<a href="#">Estudios observacionales</a>	<a href="#">STROBE</a>	<a href="#">Extensions</a>
<a href="#">Revisiones sistemáticas</a>	<a href="#">PRISMA</a>	<a href="#">Extensions</a>
<a href="#">Protocolos de estudio</a>	<a href="#">SPIRIT</a>	<a href="#">PRISMA-P</a>
<a href="#">Estudios de diagnóstico/pronóstico</a>	<a href="#">STARD</a>	<a href="#">TRIPOD</a>
<a href="#">Reportes del caso</a>	<a href="#">CARE</a>	<a href="#">Extensions</a>
<a href="#">Guías de práctica clínica</a>	<a href="#">AGREE</a>	<a href="#">RIGHT</a>
<a href="#">Investigación cualitativa</a>	<a href="#">SRQR</a>	<a href="#">COREQ</a>
<a href="#">Estudios preclínicos en animales.</a>	<a href="#">ARRIVE</a>	
<a href="#">Estudios de mejora de la calidad.</a>	<a href="#">SQUIRE</a>	<a href="#">Extensions</a>
<a href="#">Evaluaciones económicas</a>	<a href="#">CHEERS</a>	<a href="#">Extensions</a>

**Calculadora de Tamaño de Muestra**

Calcule el tamaño de muestra requerido para encuestas, experimentos y estudios de investigación. Asegure que sus resultados sean estadísticamente significativos y representativos.

Tamaño de la Población (N): (Dejar en blanco para infinito/desconocido)

ej., 10000 (opcional)

Nivel de Confianza:

95% (Z = 1.96) - Más Común

Margen de Error (%):

5

Valores comunes: 5% (estándar), 3% (más preciso), 10% (menos preciso)

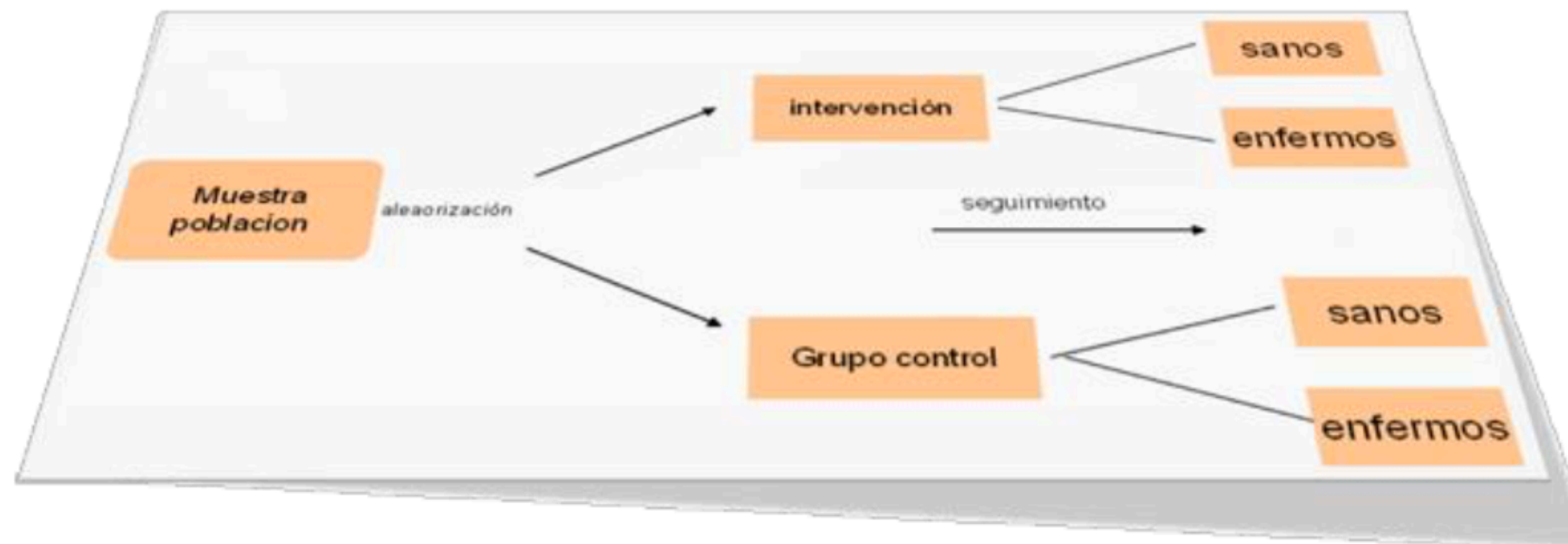
Proporción Esperada (%): (50% proporciona el tamaño máximo de muestra)

50

[Calcular Tamaño de Muestra](#) [Probar Ejemplo](#)

# DISEÑO DEL ESTUDIO

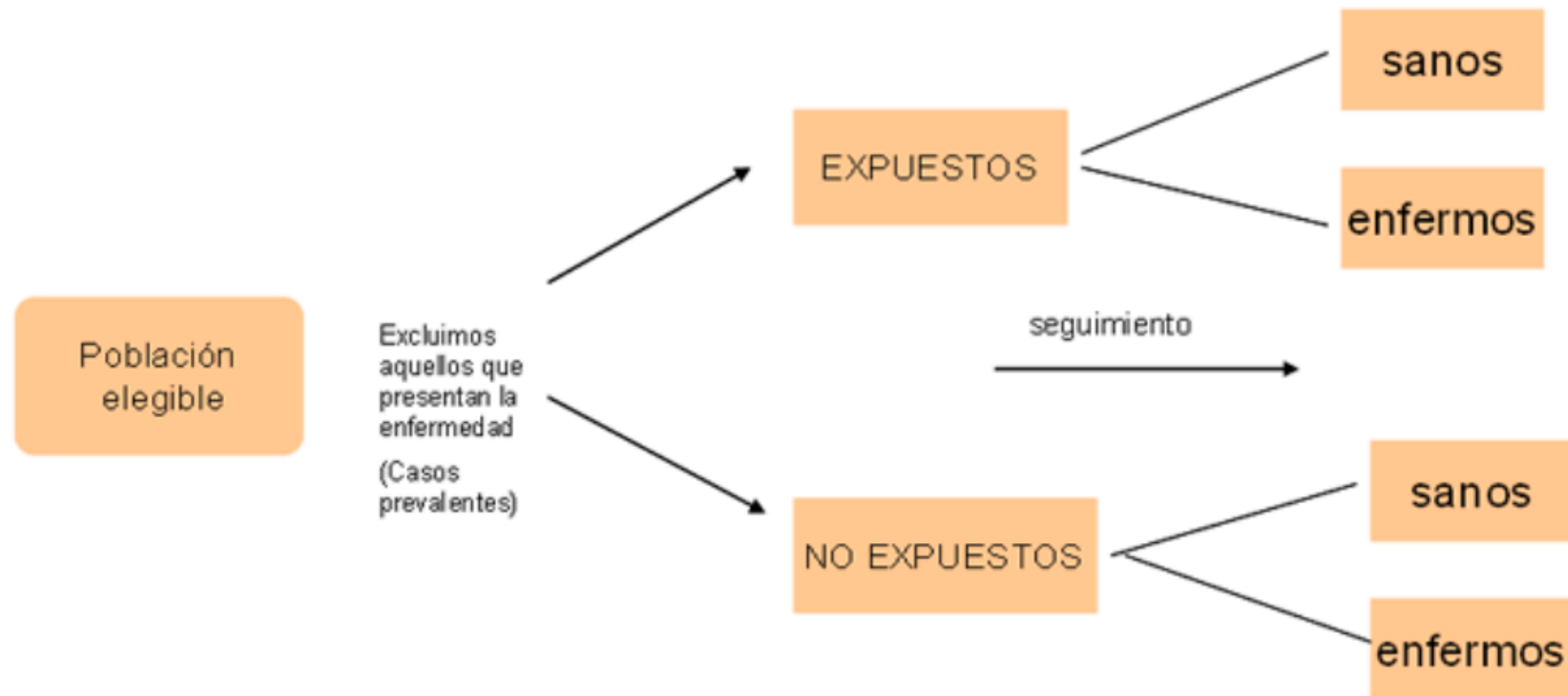
- Experimentales. El investigador APLICA UNA INTERVENCIÓN.
  - ECA: pacientes aleatorizados a grupo intervención y grupo control, son seguidos en el tiempo para medir los resultados deseados.



# DISEÑO DEL ESTUDIO

- Observacionales

**Figura V.6:** Esquema de un estudio de cohortes

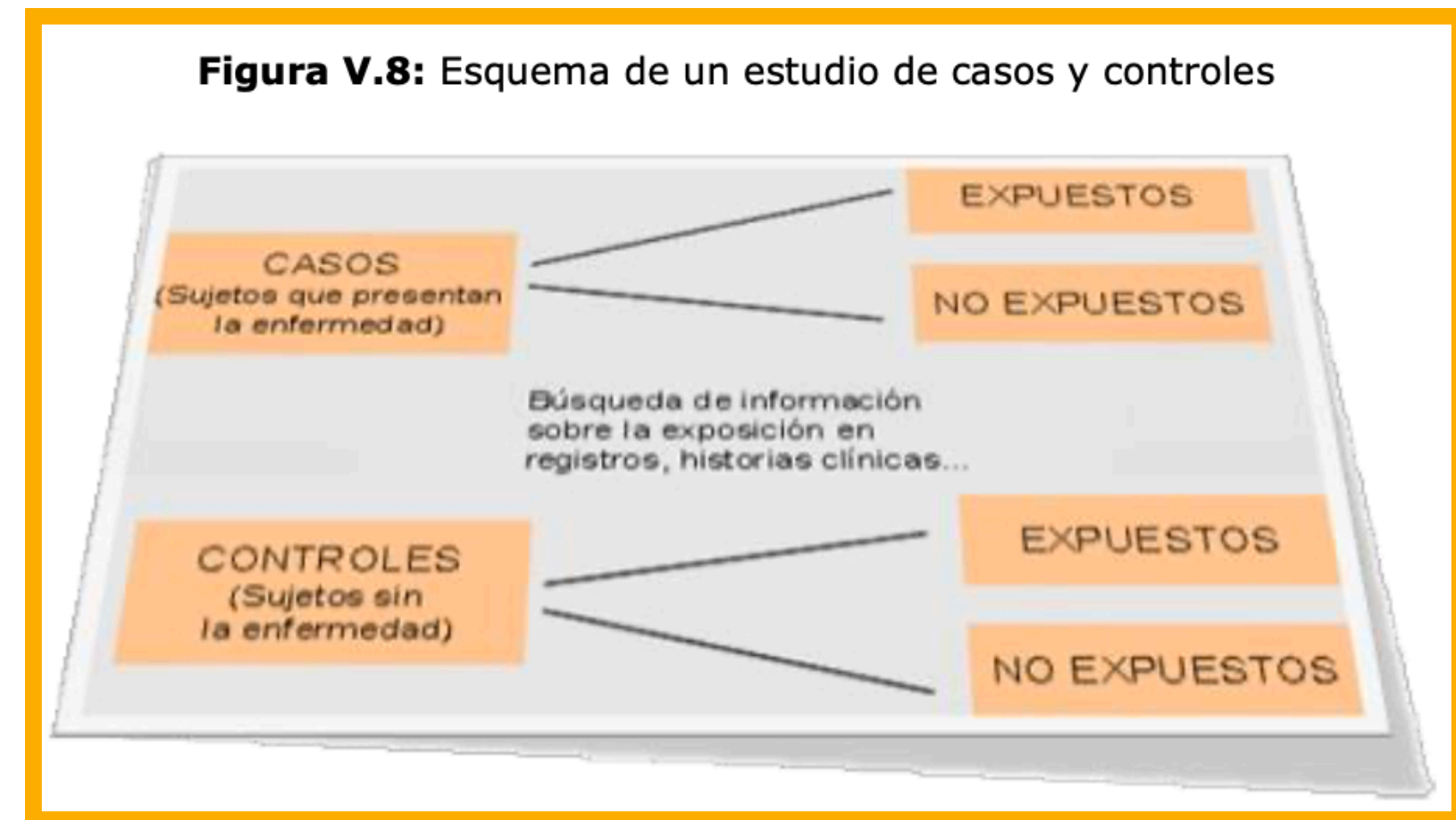


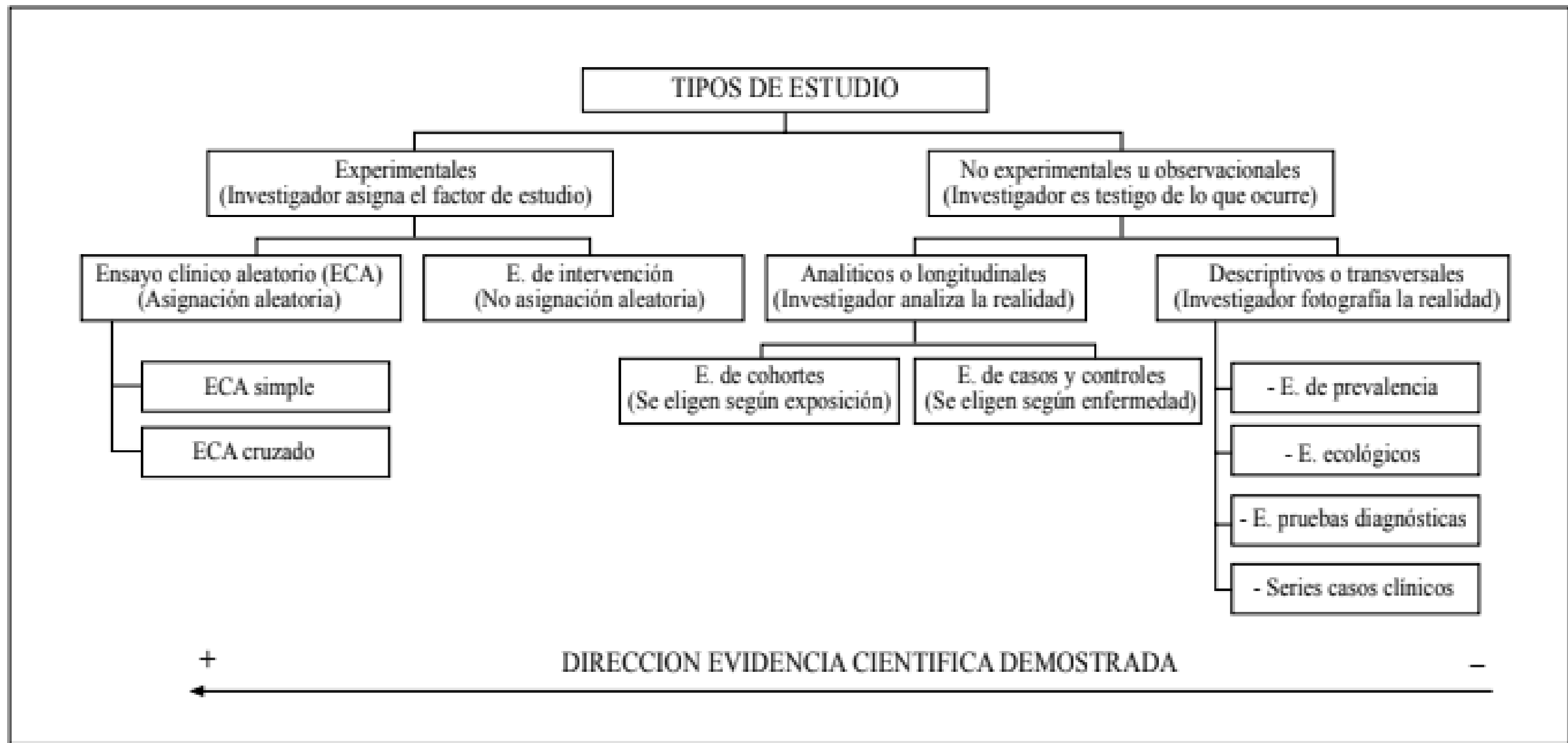
- Analíticos:

- Cohortes: grupo de personas sanas expuestas y no expuestas a determinado factor, se siguen de forma longitudinal prospectiva para determinar el desarrollo de la enfermedad.

# DISEÑO DEL ESTUDIO

- Casos y controles: grupo de personas que tienen la enfermedad (casos) se comparan con grupo de personas sanas (controles), se evalúa la exposición PREVIA a determinado factor de forma longitudinal retrospectiva. Útil para enfermedades poco prevalentes
- Descriptivos:
  - Estudios de prevalencia. Transversales, se toma un punto determinado en el tiempo, no hay seguimiento.





# RESULTADOS

## Real-World Weight Loss Observed With Semaglutide and Tirzepatide in Patients with Overweight or Obesity and Without Type 2 Diabetes (SHAPE)

Carmen D. Ng · Victoria Divino · Julia Wang · Joshua C. Toliver · Marcio Buss

- Muestra hallazgos del estudio, no debe contener opiniones ni conclusiones.
- Análisis según los objetivos.
- Claro y comprensible

Se presentan como:

- Texto (con cita a tablas y figuras).
- Auxiliares del texto:
  - Tablas - autoexplicativas, título, unidades medida, notas al pie
  - Gráficos
  - Figuras
  - Fotografías
  - Diagramas

### RESULTS

#### Patient Baseline Characteristics

Overall, a total of 9916 patients met the eligibility criteria and were included in the study; of these, 6794 (68.5%) patients received continuous treatment with semaglutide 2.4 mg and 3122 (31.5%) received continuous treatment with tirzepatide over the 1-year follow-up period (Fig. 1). Demographic and clinical characteristics were generally descriptively similar between the cohorts (Tables 1, 2). Briefly, the mean (standard deviation [SD]) age was similar between the two cohorts at 47.8 (10.3) years of age in the semaglutide 2.4 mg cohort and 49.5 (10.9) years of age in the tirzepatide cohort. Notably, more than one-third (35–38%) of the patients in both cohorts were 45 to 54 years of age, with few (3.4–8.6%)  $\geq 65$  years of age. Patients in both cohorts were predominantly female and accounted for 79.8% and 77.9% of those treated with semaglutide 2.4 mg and tirzepatide, respectively. The most common quarter (Q)-year at initiation was Q1-2023 for patients who were treated with semaglutide 2.4 mg (37.0%) and Q4-2022 for patients who were treated with tirzepatide (28.9%).

**TABLE 1**

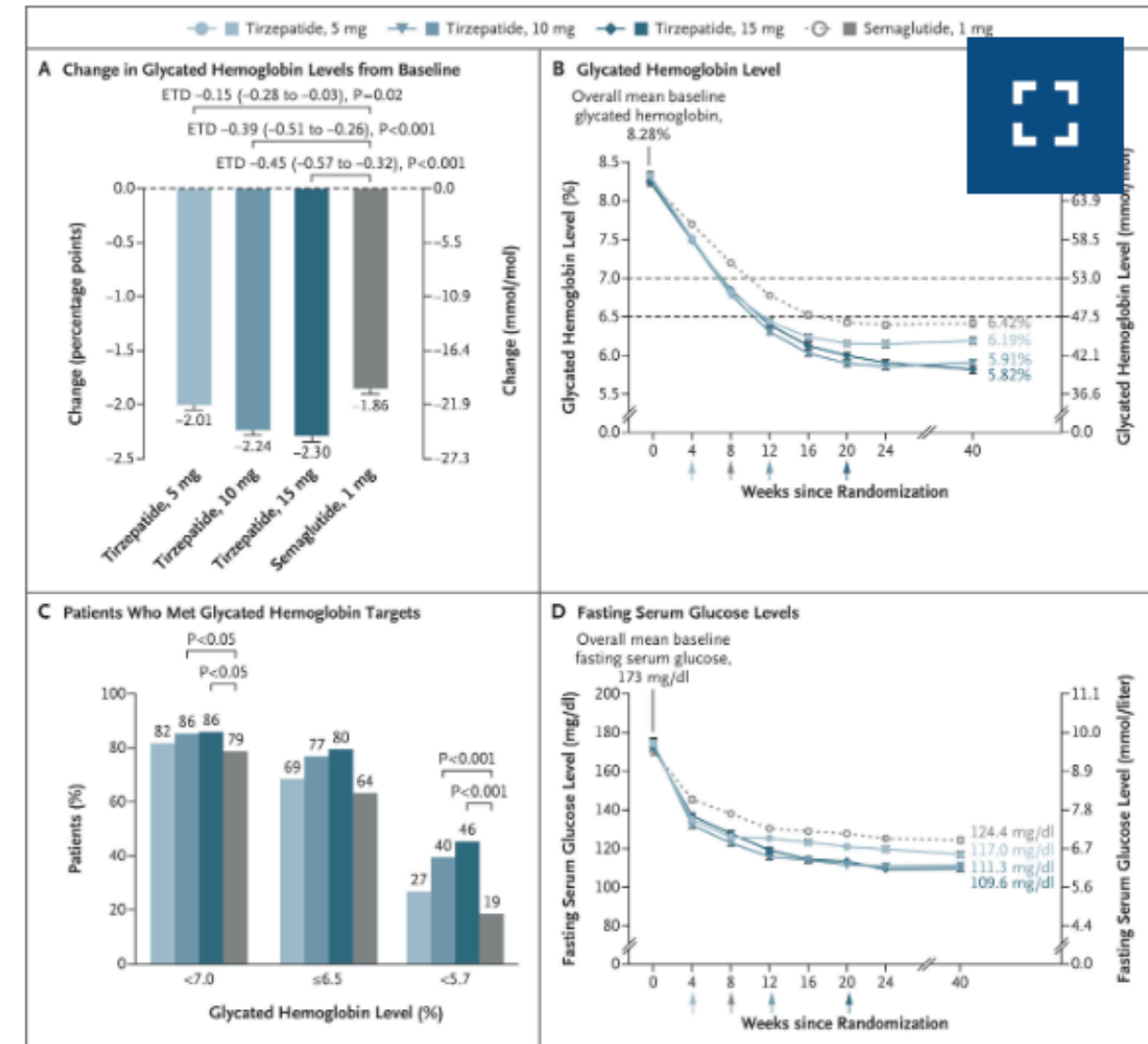
**Table 1. Demographic and Clinical Characteristics of the Patients at Baseline in the Modified Intention-to-Treat Population.**

Characteristic	Tirzepatide			Semaglutide	
	5 mg (N=470)	10 mg (N=469)	15 mg (N=470)	1 mg (N=469)	1 mg (N=469)
Age — yr	56.3±10.0	57.2±10.5	55.9±10.4	56.9±10.8	56.6±10.4
Female sex — no. (%)	265 (56.4)	231 (49.3)	256 (54.5)	244 (52.0)	996 (53.0)
Race or ethnic group — no. (%)†					
American Indian or Alaska Native	53 (11.3)	53 (11.3)	57 (12.1)	45 (9.6)	208 (11.1)
Asian	6 (1.3)	11 (2.3)	5 (1.1)	3 (0.6)	25 (1.3)
Black	28 (6.0)	21 (4.5)	15 (3.2)	15 (3.2)	79 (4.2)
White	382 (81.3)	376 (80.2)	392 (83.4)	401 (85.5)	1551 (82.6)
Hispanic	325 (69.1)	322 (68.7)	334 (71.1)	336 (71.6)	1317 (70.1)
Non-Hispanic	145 (30.9)	147 (31.3)	136 (28.9)	133 (28.4)	561 (29.9)
Glycated hemoglobin level					
Glycated hemoglobin level — %	8.32±1.08	8.30±1.02	8.26±1.00	8.25±1.01	8.28±1.03
≤8.5% — no. (%)	293 (62.3)	294 (62.7)	303 (64.5)	302 (64.4)	1192 (63.5)
>8.5% — no. (%)	177 (37.7)	175 (37.3)	167 (35.5)	167 (35.6)	686 (36.5)
Glycated hemoglobin level — mmol/mol	67.46±11.84	67.20±11.20	66.78±10.97	66.69±10.99	67.03±11.25
Fasting serum glucose level					
In mg/dl	173.8±51.87	174.2±49.79	172.4±54.37	171.4±49.77	172.9±51.46
In mmol/liter	9.65±2.88	9.67±2.76	9.57±3.02	9.51±2.76	9.60±2.86
Duration of diabetes — yr	9.1±7.16	8.4±5.90	8.7±6.85	8.3±5.80	8.6±6.46
BMI‡	33.8±6.85	34.3±6.60	34.5±7.11	34.2±7.15	34.2±6.93
Weight — kg	92.5±21.76	94.8±22.71	93.8±21.83	93.7±21.12	93.7±21.86
Waist circumference — cm	108.06±14.81	110.55±16.05	109.55±15.60	109.04±14.90	109.30±15.36
Estimated GFR§					
Mean value — ml/min/1.73 m <sup>2</sup>	96.6±17.51	95.5±16.62	96.3±16.92	95.6±17.25	96.0±17.07
Value <60 ml/min/1.73 m <sup>2</sup> — no. (%)	19 (4.0)	15 (3.2)	11 (2.3)	19 (4.1)	64 (3.4)
Value ≥60 ml/min/1.73 m <sup>2</sup> — no. (%)	451 (96.0)	454 (96.8)	459 (97.7)	450 (95.9)	1814 (96.6)
Urinary albumin-to-creatinine ratio — no. (%)¶					
<30	340 (72.3)	353 (75.3)	357 (76.0)	364 (77.6)	1414 (75.3)
30 to ≤300	111 (23.6)	87 (18.6)	85 (18.1)	90 (19.2)	373 (19.9)
>300	18 (3.8)	29 (6.2)	27 (5.7)	15 (3.2)	89 (4.7)
Use of metformin — no. (%)	470 (100.0)	469 (100.0)	470 (100.0)	469 (100.0)	1878 (100.0)
Blood pressure — mm Hg					
Systolic	130.53±14.11	131.47±13.77	130.45±14.32	129.96±12.99	130.60±13.81
Diastolic	78.61±8.89	80.03±9.59	78.97±8.97	79.33±8.61	79.23±9.03
Pulse rate — bpm	74.88±9.37	74.55±10.75	74.46±9.86	75.10±10.25	74.75±10.07

± Plus-minus values are means ±SD. Patients with a baseline estimated glomerular filtration rate (GFR) of less than 45 ml per minute per 1.73 m<sup>2</sup> were excluded from the trial.  
 † Race or ethnic group was reported by the patients.  
 ‡ Body-mass index (BMI) is the weight in kilograms divided by the square of the height in meters.  
 § The mean value of the estimated GFR was calculated according to the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) equation.  
 ¶ For the calculation of the urinary albumin-to-creatinine ratio, the amount of albumin measured in milligrams per deciliter was divided by the amount of creatinine measured in grams per deciliter.

*Demographic and Clinical Characteristics of the Patients at Baseline in the Modified Intention-to-Treat Population.*

**FIGURE 1**



*Effect of Once-Weekly Tirzepatide, as Compared with Semaglutide, on the Glycated Hemoglobin Level, Percentage of Patients Who Met Glycated Hemoglobin Level Targets, and Fasting Serum Glucose Levels.*

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# DISCUSIÓN

- Análisis de los resultados en función de los objetivos.
  - ¿Cómo se relacionan los hallazgos con la evidencia existente?
  - Fortalezas y debilidades.
  - Validez interna: diseño correcto para responder a los objetivos y las hipótesis planteadas.
  - Validez externa: se pueden generalizar los resultados a la realidad.
  - Sesgos.
  - Sugerir mejoras en la investigación del tema y áreas donde se vea necesario investigar sobre la problemática planteada.
-

# SESGOS

- Selección: características de los sujetos incluidos son diferentes a las de los no incluidos, la muestra no es representativa.
- Información: datos incompletos o poco verídicos. No participación o respuesta de los individuos seleccionados.
- Memoria: error sistemático debido a diferencias en el recuerdo de hechos o experiencias previos.
- Sesgo de exclusión: no tomar en cuenta los drop outs del estudio.

# CONCLUSIONES

- Respuesta a la pregunta de investigación.
- Se concluye de acuerdo a los objetivos planteados inicialmente.
- Las conclusiones presentadas se basan en los resultados obtenidos.
- Pueden extrapolarse a la población general de interés.

Given the relatively recent approval of semaglutide 2.4 mg and tirzepatide, real-world evidence on the effectiveness of these therapies for chronic weight management is limited. Therefore, the SHAPE study (Real-World Weight Loss Observed With Semaglutide and Tirzepatide in Patients with Overweight or Obesity And Without Type 2 Diabetes) aimed to evaluate the effectiveness of semaglutide 2.4 mg and tirzepatide in patients with overweight or obesity and without T2DM in routine clinical practice over a 1-year follow-up period.



## Real-World Weight Loss Observed With Semaglutide and Tirzepatide in Patients with Overweight or Obesity and Without Type 2 Diabetes (SHAPE)

Carmen D. Ng · Victoria Divino · Julia Wang · Joshua C. Toliver · Marcio Buss

### CONCLUSIONS

In patients with overweight or obesity and without T2DM, treatment with semaglutide 2.4 mg and tirzepatide was associated with 14.1% and 16.5% weight loss, respectively, after a 1-year follow-up period, indicating the effectiveness of these therapies in routine clinical practice in the US. Both treatments demonstrated clinically meaningful weight loss. The large sample size and demographic data enhance the generalizability of the results to the broader population and reflect a real-world context that aligns with the public health importance of addressing obesity. This study underscores semaglutide 2.4 mg and tirzepatide as important treatment options for managing obesity and its related conditions.

# CONFLICTOS DE INTERÉS

- Fuente de financiación del estudio.
- La existencia o ausencia de conflictos de intereses es declarado por los autores.

## **Real-World Weight Loss Observed With Semaglutide and Tirzepatide in Patients with Overweight or Obesity and Without Type 2 Diabetes (SHAPE)**

Carmen D. Ng · Victoria Divino · Julia Wang · Joshua C. Toliver · Marcio Buss

***Conflict of Interest.*** Carmen D. Ng, Victoria Divino, Julia Wang, Joshua C. Toliver, and Marcio Buss are employees and shareholders of Novo Nordisk Inc.



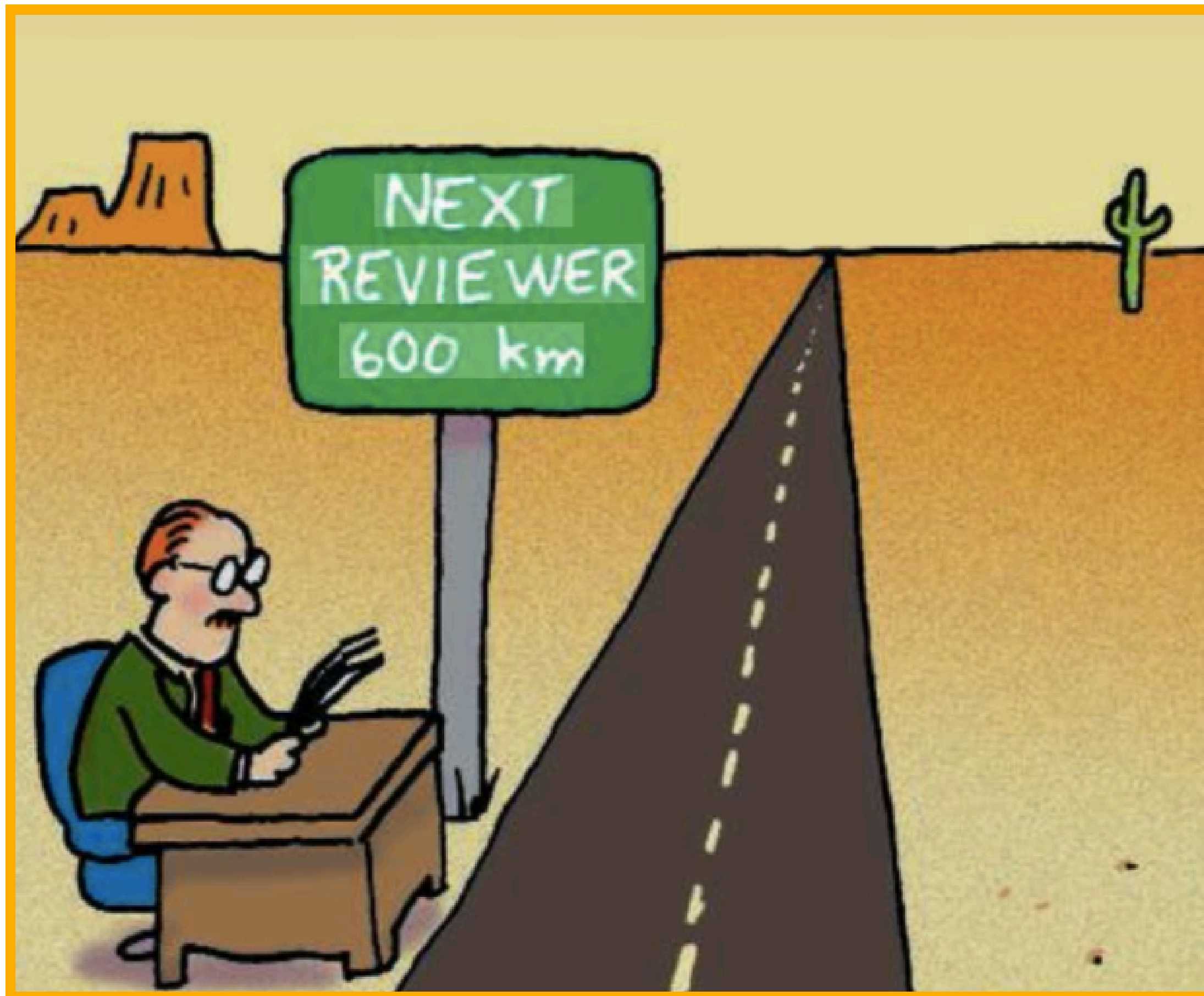
# REFERENCIAS BIBLIOGRÁFICAS

- Relacionadas con el tema de investigación.
- Actualizadas (últimos 5-10 años).
- Autorreferenciales.
- Citadas correctamente.



**CUADRO COMPARATIVO**

ASPECTO	NORMAS VANCOUBER	NORMAS APA
Área de uso principal	Se usan sobre todo en medicina, enfermería y otras ciencias de la salud.	Muy comunes en psicología, educación y otras ciencias sociales
Tipo de citación	Númerica (por orden de aparición).	Autor-fecha (apellido del autor y año).
Orden de referencias	Orden de aparición en el texto.	Orden alfabético por autor.
Formato de la bibliografía	Apellido inicial. Título. Revista. Año; volumen(número):páginas.	Apellido, Iniciales. (Año). Título. Editorial o fuente.
Uso de cursivas	No se utiliza cursiva.	Títulos de libros y revistas en cursiva
Formato	El margen es 2.54 cm en cada borde de la hoja. Tamaño de letra es 12 pts. La alineación es justificado. La fuente es Times New Román, Verdana o Arial.	El margen es 2.54 cm en cada borde de la hoja. Es necesario dejar 5 espacios en línea de cada párrafo. La fuente general es Times New Román





**MUCHAS  
GRACIAS**