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CRISTINA PRADA GONZÁLEZ
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ORIGINAL RESEARCH

Role of Artificial Intelligence in Colonoscopy Detection of Advanced Neoplasias

A Randomized Trial

Carolina Mangas-Sanjuan, MD, PhD; Luisa de-Castro, MD, PhD; Joaquín Cubiella, MD, PhD; Pilar Díez-Redondo, MD, PhD; Adolfo Suárez, MD, PhD; María Pellisé, MD, PhD; Nereida Fernández, MD; Sara Zarraquiños, MD; Henar Núñez-Rodríguez, MD, PhD; Verónica Álvarez-García, MD, PhD; Oswaldo Ortiz, MD; Noelia Sala-Miquel, MD; Pedro Zapater, MD, PhD; and Rodrigo Jover, MD, PhD; on behalf of CADILLAC study investigators*

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Telemedicine Versus In-Person Primary Care: Treatment and Follow-up Visits

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Effect of Low-Dose Aspirin Versus Placebo on Incidence of Anemia in the Elderly

A Secondary Analysis of the Aspirin in Reducing Events in the Elderly Trial

Zoe K. McQuilten, MB, BS, PhD; Le Thi Phuong Thao, PhD; Sant-Rayn Pasricha, MB, BS, PhD; Andrew S. Artz, MD, MS; Michael Bailey, PhD; Andrew T. Chan, MD, MPH; Harvey Jay Cohen, MD; Jessica E. Lockery, MB, BS, PhD; Anne M. Murray, MD, MSc; Mark R. Nelson, MB, BS, PhD; Hans G. Schneider, MD; Rory Wolfe, PhD; Robyn L. Woods, PhD; Erica M. Wood, MB, BS*; and John J. McNeil, MB, BS, PhD*

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The Effect of Low-Dose Glucocorticoids Over Two Years on Weight and Blood Pressure in Rheumatoid Arthritis: Individual Patient Data From Five Randomized Trials

Andriko Palmowski, MD; Sabrina M. Nielsen, BSc, MSc, PhD; Zhivana Boyadzhieva, MD; Linda Hartman, BSc, MSc, PhD; Judith Oldenkott; Björn Svensson, MD, PhD; Ingiöld Hafström, MD, PhD; Siegfried Wassenberg, MD; Ernest Choy, MD; John Kirwan, MD; Robin Christensen, BSc, MSc, PhD; Maarten Boers, MD, MSc, PhD; and Frank Buttgereit, MD

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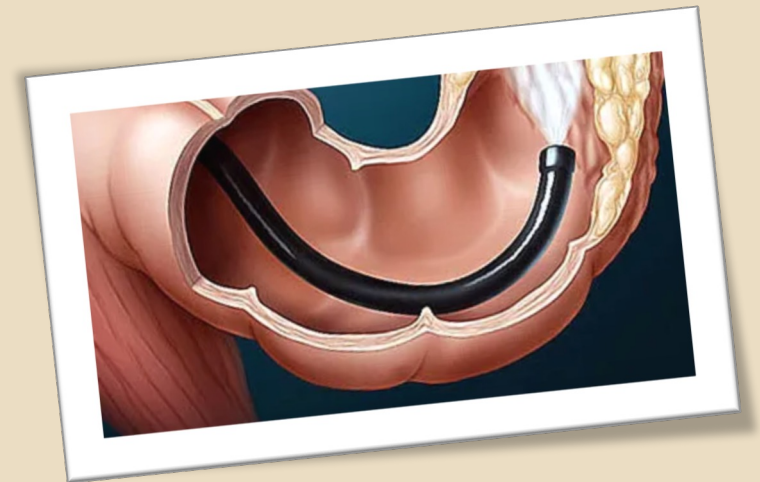
ORIGINAL RESEARCH

Role of Artificial Intelligence in Colonoscopy Detection of Advanced Neoplasias

A Randomized Trial

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- Evaluar la contribución de la tecnología asistida por ordenador para detectar **CCR avanzado** por COLONOSCOPIA.
 - ADENOMA ($\geq 20\%$ vellosidades, ≥ 10 mm, DAG)
 - SERRADOS (≥ 10 mm, displasia o adenoma serrado)
- Ensayo controlado aleatorio, multicéntrico y paralelo.
- Programa español de cribado de CCR.
 - Tasa de detección 35% (5% relevante).
- 3.213 pacientes con prueba inmunoquímica fecal +.
- Pacientes asignados aleatoriamente a una colonoscopia **CON/SIN** detección asistida por ordenador.



■ Cribado de CCR

- *Reduce la tasa de mortalidad e incidencia al detectar y extirpar lesiones premalignas (adenomas y pólipos serrados).*
- *Las pruebas inmunoquímicas fecales identifican a personas con mayor riesgo.*



■ OBJETIVO 2ª

- *Evaluar el papel de la tecnología asistida por odenador para detección de ADENOMAS, PÓLIPOS SERRADOS y lesiones NO polipoides o del lado derecho.*

■ MÉTODOS

– *Diseño del estudio*

- Ensayo multicéntrico, paralelo, controlado y aleatorizado.
- 6 centros españoles.
- Consentimiento informado.
- Registro de datos de los pacientes de forma anónima en la base de datos REDCap.

– *Población del estudio*

- Realizar una colonoscopia tras una prueba de inmunoquímica + (Hb 20 mg/g de heces).
- Colonoscopia completa con intubación cecal y adecuada limpieza del colon.

■ Excluidos:

- AP CCR
- EII
- Cirugía colorrectal
- AF CCR hereditario
- Falta de CI



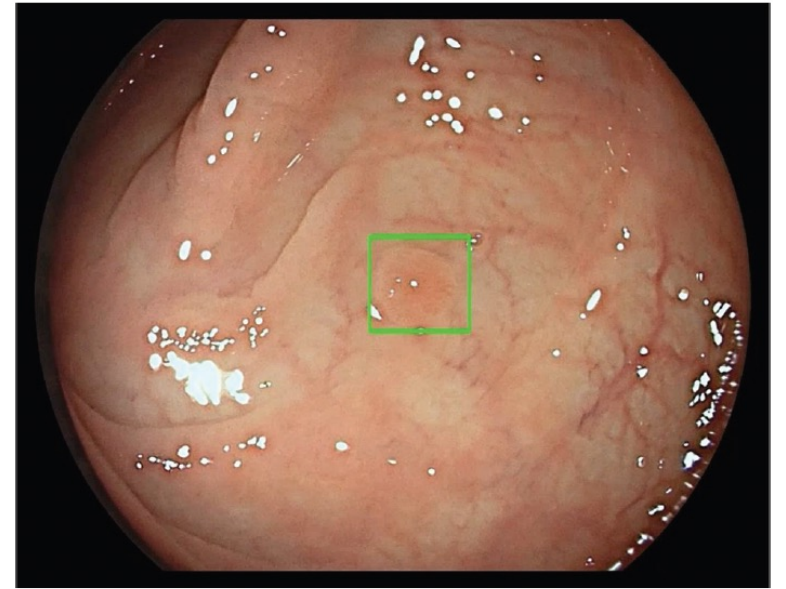
– *Aleatorización*

- Asignación aleatoria a colonoscopia CON/SIN ayuda de la detección asistida por ordenador estratificado por centro, sexo y edad.
- Pacientes cegados, endoscopista conocedor de la asignación, patólogos cegados.
- Evaluación en tiempo real con eliminación o no de la lesión resaltada según criterio de endoscopista.

– *Análisis estadístico*

- IC 95% para el resultado primario; 99,9% para secundarios.

Figure 1. On polyp identification by the computer-aided detection device, a green box surrounds the lesion to allow attention of the endoscopist and real-time evaluation.



■ RESULTADOS

– *Abril 2021 hasta Marzo 2022.*

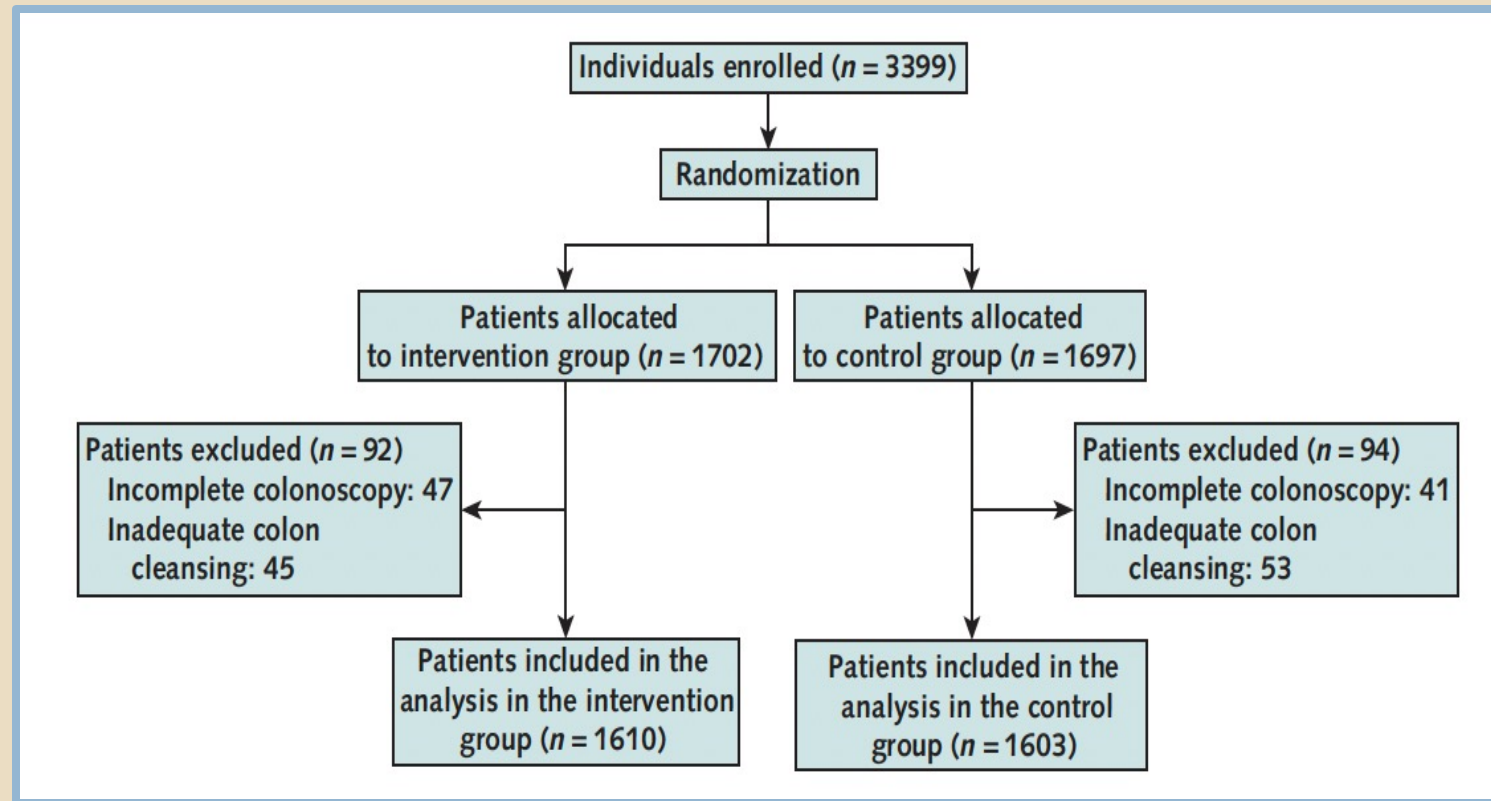


Table 1. Baseline Characteristics of Study Participants

Characteristic	Total (<i>n</i> = 3213)	Intervention Group (<i>n</i> = 1610)	Control Group (<i>n</i> = 1603)
Mean age (SD), <i>y</i>	60.7 (5.8)	60.7 (5.8)	60.6 (5.7)
Age, <i>n</i> (%)			
≥60 <i>y</i>	1855 (57.7)	933 (58.0)	922 (57.5)
<60 <i>y</i>	1358 (42.3)	677 (42.0)	681 (42.5)
Sex, <i>n</i> (%)			
Male	1717 (53.4)	865 (53.7)	852 (53.2)
Female	1496 (46.6)	745 (46.3)	751 (46.8)
Mean total bowel preparation score (SD)	7.83 (1.27)	7.84 (1.26)	7.83 (1.27)
Mean withdrawal time (SD)*, <i>min</i>	16.3 (9.9)	16.9 (10.3)	15.7 (9.4)
Mean withdrawal time in normal colonoscopies (SD)†, <i>min</i>	10.2 (4.8)	10.6 (5.3)	9.8 (4.3)

* The information was missing in 17 cases and 14 cases in the intervention and control groups, respectively.

† The information was missing in 4 cases and 1 case in the intervention and control groups, respectively.

Outcome	Intervention Group (n = 1610)	Control Group (n = 1603)	Risk Ratio* (99.9% CI)	Rate Ratio* (99.9% CI)	P Value
Primary outcome, % (n)					
Advanced colorectal neoplasia detection rate†	34.8 (560)	34.6 (553)	1.01 (0.92 to 1.10)	-	0.91
Secondary outcomes, % (n)					
Advanced adenoma detection rate†	30.5 (490)	31.3 (500)	0.98 (0.84 to 1.14)	-	0.60
Advanced serrated lesion detection rate‡	6.5 (104)	5.3 (84)	1.23 (0.77 to 1.97)	-	0.14
CRC detection rate	3.7 (59)	3.2 (51)	1.15 (0.62 to 2.13)	-	0.46
Polyp detection rate	73.4 (1182)	70.1 (1124)	1.11 (0.94 to 1.30)	-	0.036
Adenoma detection rate†	64.2 (1033)	62.0 (990)	1.06 (0.91 to 1.23)	-	0.23
Serrated lesion detection rate‡	21.3 (343)	17.1 (273)	1.21 (0.96 to 1.52)	-	0.008
Mean number of lesions detected per colonoscopy (SD)					
Advanced colorectal neoplasia†	0.54 (0.95)	0.52 (0.95)	-	1.04 (0.88 to 1.22)	0.44
Advanced adenoma†	0.44 (0.82)	0.44 (0.82)	-	1.00 (0.84 to 1.19)	0.98
Advanced serrated lesions§	0.10 (0.45)	0.08 (0.41)	-	1.25 (0.84 to 1.85)	0.063
Polyps	2.54 (3.17)	2.25 (3.17)	-	1.13 (1.05 to 1.22)	<0.001
Adenoma†	1.78 (2.38)	1.59 (2.20)	-	1.12 (1.02 to 1.22)	<0.001
Serrated lesions‡	0.38 (1.11)	0.31 (1.09)	-	1.22 (1.00 to 1.49)	0.001

CRC = colorectal cancer.

* After adjustment for center, endoscopist, and patient sex and age. The CI shown for the primary outcome is the 95% CI.

† The information was missing in 2 cases and 7 cases in the intervention and control groups, respectively.

‡ The information was missing in 2 cases and 8 cases in the intervention and control groups, respectively.

§ The information was missing in 2 cases and 9 cases in the intervention and control groups, respectively.

■ DISCUSIÓN/CONCLUSIÓN

- *Sistema de detección asistido por ordenador **NO** aumentó la detección de CCR avanzado.*
 - Tasa de detección en el grupo control fue alta por población con mayor prevalencia
 - Endoscopistas experimentados

- *Grupo de intervención se asoció a mayor detección de pólipos, adenomas, lesiones no polipoides y lesiones proximales.*
 - ¿Cuánto margen de acción queda para prevenir CCR?

– *La inteligencia artificial tiene funciones de mejora de la calidad de la colonoscopia:*

- Óptica
- Garantía de calidad
- Mejor exposición de la mucosa
- Mayor homogeneidad de la intubación cecal
- Mayor evaluación de la limpieza del colon



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ORIGINAL RESEARCH

Telemedicine Versus In-Person Primary Care: Treatment and Follow-up Visits

Mary Reed, DrPH; Jie Huang, PhD; Madeline Somers, MPH, MS; Loretta Hsueh, PhD; Ilana Graetz, PhD; Andrea Millman, MA; Emilie Muelly, MD, PhD; and Anjali Gopalan, MD

- Comparar el **tratamiento** (medicación, análisis o pruebas de imagen) y el **seguimiento** los 7 días posteriores a la visita (consultas, visitas a urgencias y hospitalización) entre telemedicina por vídeo o teléfono en atención primaria y visitas a la consulta en persona.
- Diseño retrospectivo basado en análisis administrativos y datos de la HC electrónica.
- Resultados ajustados por *factores sociodemográficos y características clínicas* generales estratificadas por área clínica:
 - *Dolor abdominal/espalda*
 - *Alteraciones gastrointestinales*
 - *Dolor musculoesquelético*
 - *Visita rutinaria*
 - *HTA/DM*
 - *Salud mental*
 - *Dermatología*



■ MÉTODOS

- *21 hospitales del norte de California. >9.000 médicos.*
- *Abril de 2021 y Diciembre de 2021.*
- *Estudio de cohorte observacional.*
- *Exclusión de visitas con diagnóstico de COVID-19 o infección respiratoria.*
- *Análisis estadístico:*

- Regresión logística multivariable que examina la asociación entre los resultados de la visita índice con un análisis separado modelo para cada tratamiento.

■ RESULTADOS

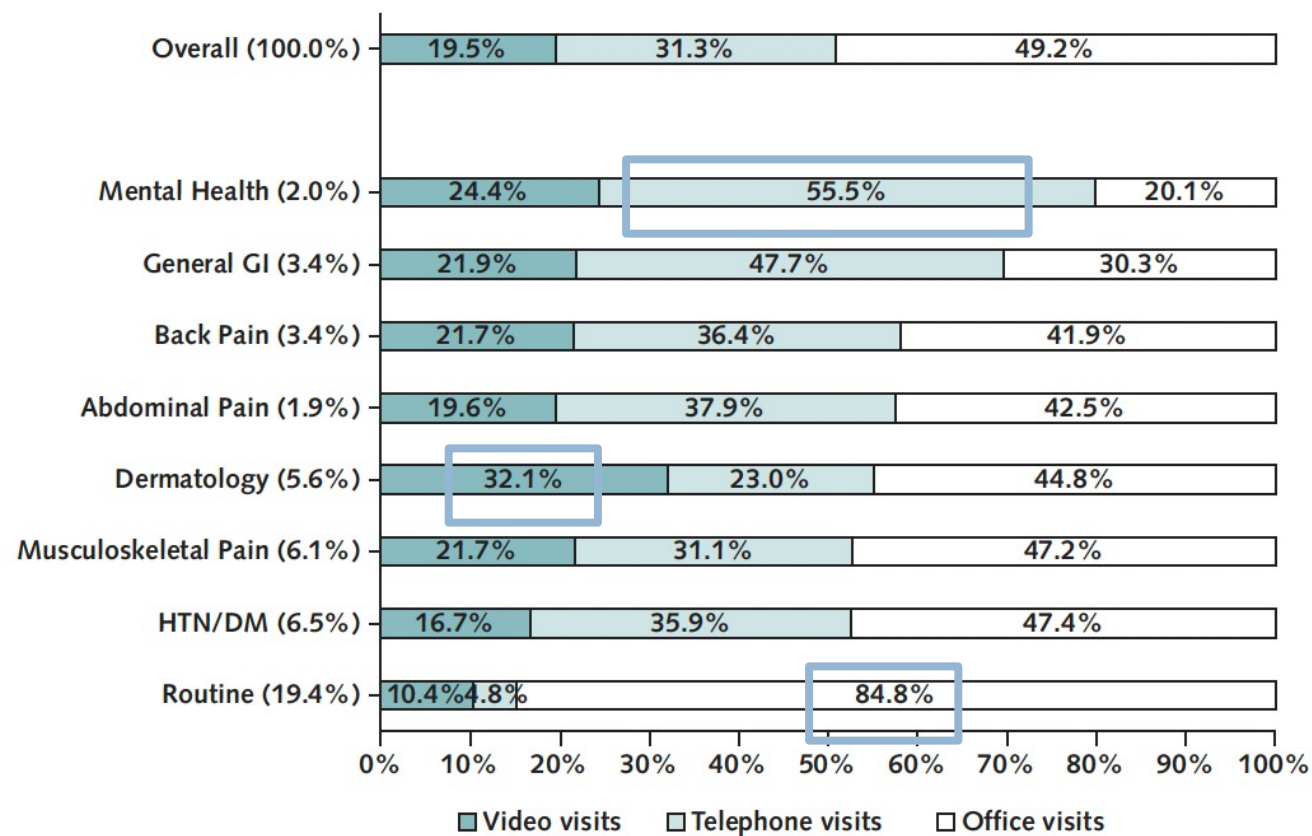
Patient Characteristic	Visit Type			
	All (n = 2 357 598), %	Office (n = 1 158 786), %	Video (n = 460 909), %	Telephone (n = 737 903), %
Age				
18-44 y	38.5	34.9	47.4	38.5
45-64 y	33.1	32.9	31.4	34.5
65-74 y	15.9	18.0	13.7	14.1
≥75 y	12.5	14.1	7.6	12.9
Female sex	56.1	53.1	58.1	59.5
Race or ethnicity				
Asian	21.6	22.4	24.6	18.4
Black	7.8	7.0	7.4	9.2
Hispanic	23.0	22.2	20.8	25.6
White	46.2	47.0	45.7	45.2
Lower neighborhood SES*	21.8	21.3	19.8	23.9
Lower neighborhood internet†	30.0	29.8	26.8	32.1
Preferred language, English	89.5	88.8	92.5	88.7
Visit with own PCP	70.4	77.2	65.1	63.2
Video visit in prior 365 days	45.3	39.8	61.0	44.3
Mobile portal access in prior 365 days	62.0	59.4	71.1	60.5
Having proxy for patient portal	2.6	2.7	2.8	2.3
Chronic conditions				
Diabetes	12.4	12.2	9.7	14.5
Heart failure	1.5	1.5	1.0	1.8
Hypertension	25.7	26.8	20.8	27.1
Asthma	5.5	4.9	5.6	6.5

* At least 20% of households have household incomes below the federal poverty level or at least 25% of residents 25 years of age or older have less than a high school education in the census block group.

† Less than 80% of households have a residential fixed high-speed connection with at least 10 megabits per second (Mbps) downstream and at least 1 Mbps upstream in census tract-based Federal Communication Commission data.

PCP = primary care provider; SES = socioeconomic status.

Figure. Percentage of index visit type by clinical concern area.



Percentage shown in label on y-axis is the percentage of all study visits in each diagnosis group.
DM = diabetes; GI = gastrointestinal; HTN = hypertension.

Table 2. Adjusted Rate of Medication and Antibiotic Prescribing by Index Visit Type and Difference Between Telemedicine and Office Visit*

Visit Type	Visits, <i>n</i>	Medication Prescribing, %		Antibiotic Prescribing, %	
		Adjusted	Adjusted Difference vs. Office (95% CI)	Adjusted	Adjusted Difference vs. Office (95% CI)
Overall					
Office	1 158 786	46.8		6.6	
Video	460 909	38.4	−8.3 (−8.5 to −8.2)	6.6	0.1 (0.0 to 0.1)
Telephone	737 903	34.6	−12.2 (−12.3 to −12.0)	6.7	0.2 (0.1 to 0.3)
Routine					
Office	387 550	37.6		2.4	
Video	47 329	28.3	−9.3 (−9.7 to −8.8)	1.3	−1.1 (−1.2 to −1.0)
Telephone	22 014	20.1	−17.4 (−18.0 to −16.9)	1.0	−1.4 (−1.6 to −1.3)
HTN/DM					
Office	72 812	59.6		3.4	
Video	25 676	47.8	−11.7 (−12.5 to −11.0)	2.2	−1.2 (−1.4 to −0.9)
Telephone	55 172	45.9	−13.6 (−14.2 to −13.0)	0.9	−2.5 (−2.7 to −2.3)
Musculoskeletal pain					
Office	68 317	43.8		1.4	
Video	31 387	28.3	−15.5 (−16.1 to −14.8)	0.8	−0.6 (−0.7 to −0.5)
Telephone	44 932	24.0	−19.8 (−20.4 to −19.2)	0.5	−0.9 (−1.1 to −0.8)
Back pain					
Office	33 607	62.3		1.3	
Video	17 355	50.8	−11.5 (−12.5 to −10.6)	0.5	−0.8 (−1.0 to −0.6)
Telephone	29 178	47.1	−15.2 (−16.0 to −14.4)	0.3	−1.0 (−1.1 to −0.8)
Dermatology					
Office	59 352	55.5		16.0	
Video	42 574	50.3	−5.1 (−5.8 to −4.5)	16.6	0.6 (0.1 to 1.1)
Telephone	30 513	43.1	−12.4 (−13.1 to −11.7)	14.4	−1.5 (−2.1 to −1.0)
General GI					
Office	24 430	61.3		2.6	
Video	17 666	45.1	−16.2 (−17.2 to −15.2)	1.9	−0.7 (−1.0 to −0.4)
Telephone	38 424	42.4	−18.9 (−19.7 to −18.1)	1.8	−0.8 (−1.0 to −0.5)
Abdominal pain					
Office	19 151	43.8		4.5	
Video	8851	30.3	−13.6 (−14.8 to −12.3)	3.0	−1.5 (−2.0 to −1.0)
Telephone	17 082	26.5	−17.4 (−18.4 to −16.4)	3.3	−1.2 (−1.6 to −0.8)
Mental health					
Office	9259	66.9		1.9	
Video	11 228	60.6	−6.3 (−7.6 to −4.9)	0.7	−1.2 (−1.5 to −0.8)
Telephone	25 552	57.4	−9.5 (−10.6 to −8.3)	0.4	−1.5 (−1.8 to −1.2)

Table 3. Adjusted Rate of Laboratory and Image Ordering by Index Visit Type and Difference Between Telemedicine and Office Visit*

Visit Type	Visits, <i>n</i>	Laboratory Ordering, %		Image Ordering, %	
		Adjusted	Adjusted Difference vs. Office (95% CI)	Adjusted	Adjusted Difference vs. Office (95% CI)
Overall					
Office	1 158 786	41.4		20.5	
Video	460 909	27.4	−14.1 (−14.2 to −13.9)	11.9	−8.5 (−8.7 to −8.4%)
Telephone	737 903	22.8	−18.6 (−18.7 to −18.5)	8.7	−11.7 (−11.8 to −11.6)
Routine					
Office	387 550	68.6		15.0	
Video	47 329	57.8	−10.8 (−11.2 to −10.3)	8.6	−6.4 (−6.6 to −6.1%)
Telephone	22 014	53.6	−14.9 (−15.6 to −14.3)	6.2	−8.8 (−9.2 to −8.5%)
HTN/DM					
Office	72 812	44.4		16.2	
Video	25 676	32.8	−11.6 (−12.3 to −10.9%)	7.1	−9.1 (−9.5 to −8.7%)
Telephone	55 172	24.0	−20.4 (−20.9 to −19.9)	2.9	−13.3 (−13.7 to −13.0)
Musculoskeletal pain					
Office	68 317	21.4		57.4	
Video	31 387	13.5	−7.9 (−8.4 to −7.4)	45.0	−12.4 (−13.1 to −11.7)
Telephone	44 932	9.5	−11.8 (−12.3 to −11.4)	38.9	−18.5 (−19.1 to −17.9)
Back pain					
Office	33 607	21.6		41.9	
Video	17 355	10.8	−10.8 (−11.5 to −10.1)	25.6	−16.3 (−17.1 to −15.4)
Telephone	29 178	7.2	−14.3 (−14.9 to −13.8)	21.4	−20.5 (−21.2 to −19.8)
Dermatology					
Office	59 352	22.2		6.7	
Video	42 574	10.3	−11.9 (−12.4 to −11.5)	1.8	−4.9 (−5.1 to −4.6)
Telephone	30 513	9.5	−12.7 (−13.2 to −12.2)	1.2	−5.5 (−5.7 to −5.2)
General GI					
Office	24 430	46.3		11.0	
Video	17 666	32.7	−13.7 (−14.7 to −12.7)	4.7	−6.3 (−6.8 to −5.8)
Telephone	38 424	26.3	−20.1 (−20.8 to −19.3)	3.1	−7.9 (−8.4 to −7.5)
Abdominal pain					
Office	19 151	69.0		39.8	
Video	8851	47.7	−21.3 (−22.6 to −20.1)	22.9	−16.9 (−18.1 to −15.8)
Telephone	17 082	38.5	−30.5 (−31.5 to −29.5)	16.8	−23.0 (−23.9 to −22.1)
Mental health					
Office	9259	31.7		6.1	
Video	11 228	13.7	−18.0 (−19.2 to −16.8)	1.4	−4.7 (−5.2 to −4.1)
Telephone	25 552	7.7	−24.1 (−25.1 to −23.0)	1.0	−5.1 (−5.6 to −4.6)

Table 4. Adjusted Rate of 7-Day Primary Care Office Visit, ED Visit, or Hospitalization by Index Visit Type, and Difference Between Telemedicine and Office Visit

Visit Type	Visits, n	7-Day PCP Office Visit, %		7-Day ED Visit, %		7-Day Hospitalization, %	
		Adjusted	Adjusted Difference vs. Office (95% CI)	Adjusted	Adjusted Difference vs. Office (95% CI)	Adjusted	Adjusted Difference vs. Office (95% CI)
Overall							
Office	1 158 786	1.3		1.6		0.21	
Video	460 909	6.2	4.9 (4.8 to 5.0)	1.8	0.2 (0.2 to 0.2)	0.24	0.03 (0.01 to 0.05)
Telephone	737 903	7.6	6.3 (6.2 to 6.4)	2.1	0.6 (0.5 to 0.6)	0.25	0.04 (0.03 to 0.06)
Routine							
Office	387 550	0.7		0.5		0.06	
Video	47 329	3.0	2.3 (2.2 to 2.5)	0.5	0.0 (−0.1 to 0.0)	0.07	0.00 (−0.02 to 0.03)
Telephone	22 014	5.9	5.2 (4.9 to 5.6)	0.8	0.3 (0.2 to 0.4)	0.13	0.07 (0.02 to 0.12)
HTN/DM							
Office	72 812	1.2		1.3		0.19	
Video	25 676	4.3	3.0 (2.7 to 3.3)	1.5	0.2 (0.0 to 0.3)	0.23	0.04 (−0.03 to 0.11)
Telephone	55 172	4.4	3.2 (3.0 to 3.4)	1.3	0.0 (−0.1 to 0.2)	0.16	−0.04 (−0.08 to 0.01)
Musculoskeletal pain							
Office	68 317	1.7		1.2		0.11	
Video	31 387	9.9	8.2 (7.8 to 8.6)	1.4	0.2 (0.0 to 0.4)	0.10	−0.01 (−0.06 to 0.04)
Telephone	44 932	14.9	13.2 (12.8 to 13.5)	2.0	0.8 (0.6 to 0.9)	0.16	0.05 (0.01 to 0.10)
Back pain							
Office	33 607	1.4		1.1		0.10	
Video	17 355	5.9	4.5 (4.1 to 4.9)	1.4	0.3 (0.1 to 0.5)	0.16	0.06 (−0.02 to 0.14)
Telephone	29 178	8.1	6.7 (6.3 to 7.0)	2.0	0.8 (0.6 to 1.0)	0.10	0.01 (−0.05 to 0.06)
Dermatology							
Office	59 352	1.7		1.1		0.13	
Video	42 574	8.6	6.9 (6.6 to 7.2)	1.3	0.2 (0.0 to 0.3)	0.14	0.01 (−0.04 to 0.06)
Telephone	30 513	12.4	10.7 (10.4 to 11.1)	1.7	0.6 (0.5 to 0.8)	0.11	−0.01 (−0.06 to 0.03)
General GI							
Office	24 430	1.2		2.1		0.29	
Video	17 666	4.7	3.4 (3.1 to 3.8)	2.6	0.4 (0.1 to 0.8)	0.44	0.15 (0.01 to 0.29)
Telephone	38 424	5.5	4.2 (4.0 to 4.5)	2.9	0.8 (0.6 to 1.1)	0.40	0.11 (0.02 to 0.21)
Abdominal pain							
Office	19 151	2.0		6.3		0.80	
Video	8851	11.0	9.1 (8.4 to 9.8)	6.1	−0.2 (−0.8 to 0.4)	0.96	0.15 (−0.12 to 0.43)
Telephone	17 082	14.5	12.5 (12.0 to 13.1)	7.0	0.7 (0.2 to 1.3)	0.91	0.11 (−0.09 to 0.31)
Mental health							
Office	9259	1.1		1.5		0.21	
Video	11 228	2.5	1.3 (1.0 to 1.7)	1.4	−0.1 (−0.5 to 0.2)	0.06	−0.15 (−0.27 to −0.04)
Telephone	25 552	2.1	1.0 (0.7 to 1.3)	1.3	−0.2 (−0.5 to 0.1)	0.14	−0.07 (−0.18 to 0.05)

■ DISCUSIÓN/CONCLUSIONES

- *Casi la mitad de las visitas a AP eran con telemedicina.*
- *Las prescripciones de medicamentos, análisis de laboratorio y pruebas de imagen fueron más altas en visitas en persona y más baja en telefónicas.*
- *Las revisitas en persona fueron mayores tras la telemedicina.*
 - ¿Aborda adecuadamente las necesidades de los pacientes?
- *La telemedicina a largo plazo puede ser una opción conveniente para ampliar el acceso a AP.*
- *La telemedicina evita barreras de acceso.*
- *Limitaciones:*
 - Estudio grande en zonas con disponibilidad de telemedicina desde 2016.
 - No se puede generalizar.

Effect of Low-Dose Aspirin Versus Placebo on Incidence of Anemia in the Elderly

A Secondary Analysis of the Aspirin in Reducing Events in the Elderly Trial

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- Efecto de la **AAS** en dosis bajas sobre la incidencia de **anemia** en ancianos.
- Objetivo 2º: efecto de la AAS sobre la **Hb** y niveles de **ferritina**.
- Análisis post hoc con ensayo controlado aleatorizado doble ciego.
- Atención Primaria en Australia y Estados Unidos.

- 30% mayores de 75 años tienen anemia:
 - *Deficiencia de hierro (15-20%)*
 - *Comorbilidades (ERC)*
 - *Inflamación*
 - *1/3 causa inexplicable*
- 50% de las personas mayores en EEUU toman AAS preventivo.
 - *> riesgo de hemorragia*
 - *> riesgo de anemia por pérdida de sangre oculta y deficiencia de Fe*

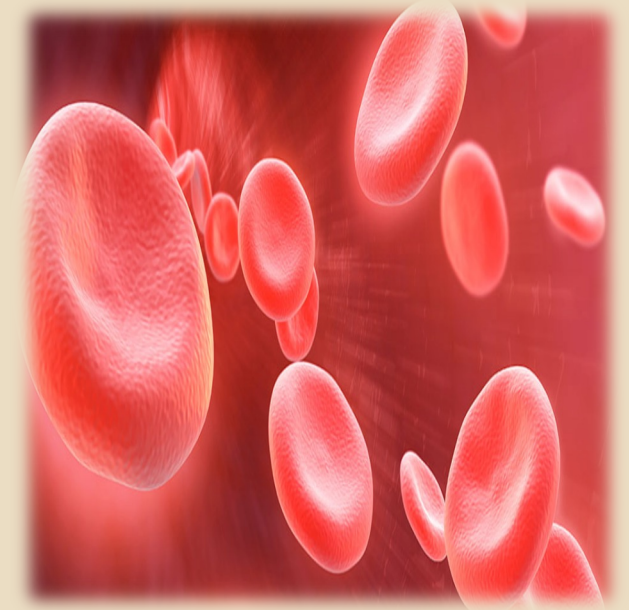


■ MÉTODOS

– *Criterios de exclusión:*

- Anemia
- Alto riesgo de sangrado
- Uso de AAS, antiplaquetarios o anticoagulantes
- AP evento cardiovascular
- Fibrilación auricular
- Enfermedad intercurrente grave
- Demencia

- 100 mg de AAS diario o placebo.
- Medición anual de **Hb** y de **ferritina** al inicio y 3 años después.
- Se les permitió tomar AINES.
- Mediana de seguimiento de 4,7 años.



■ RESULTADOS

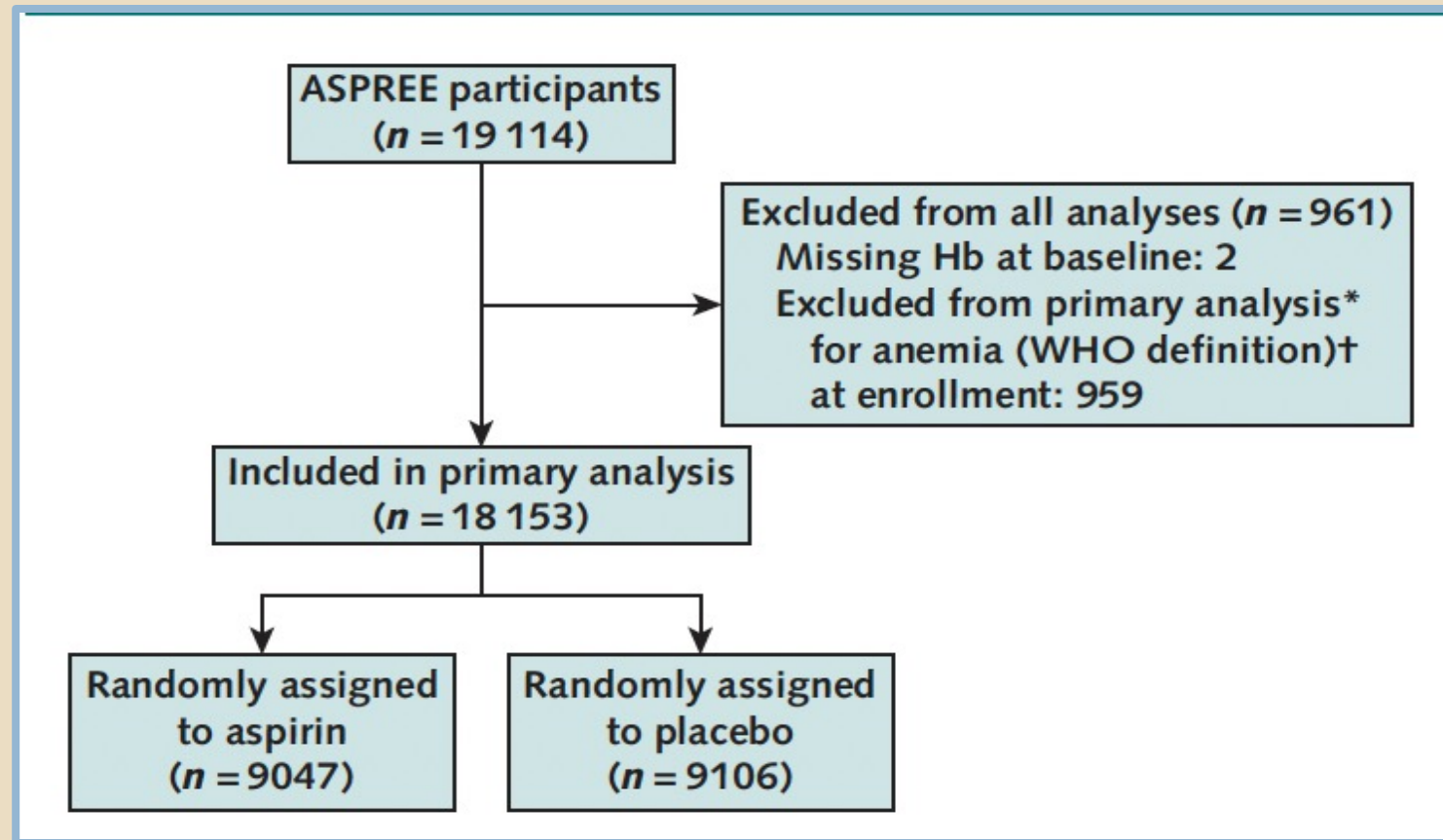
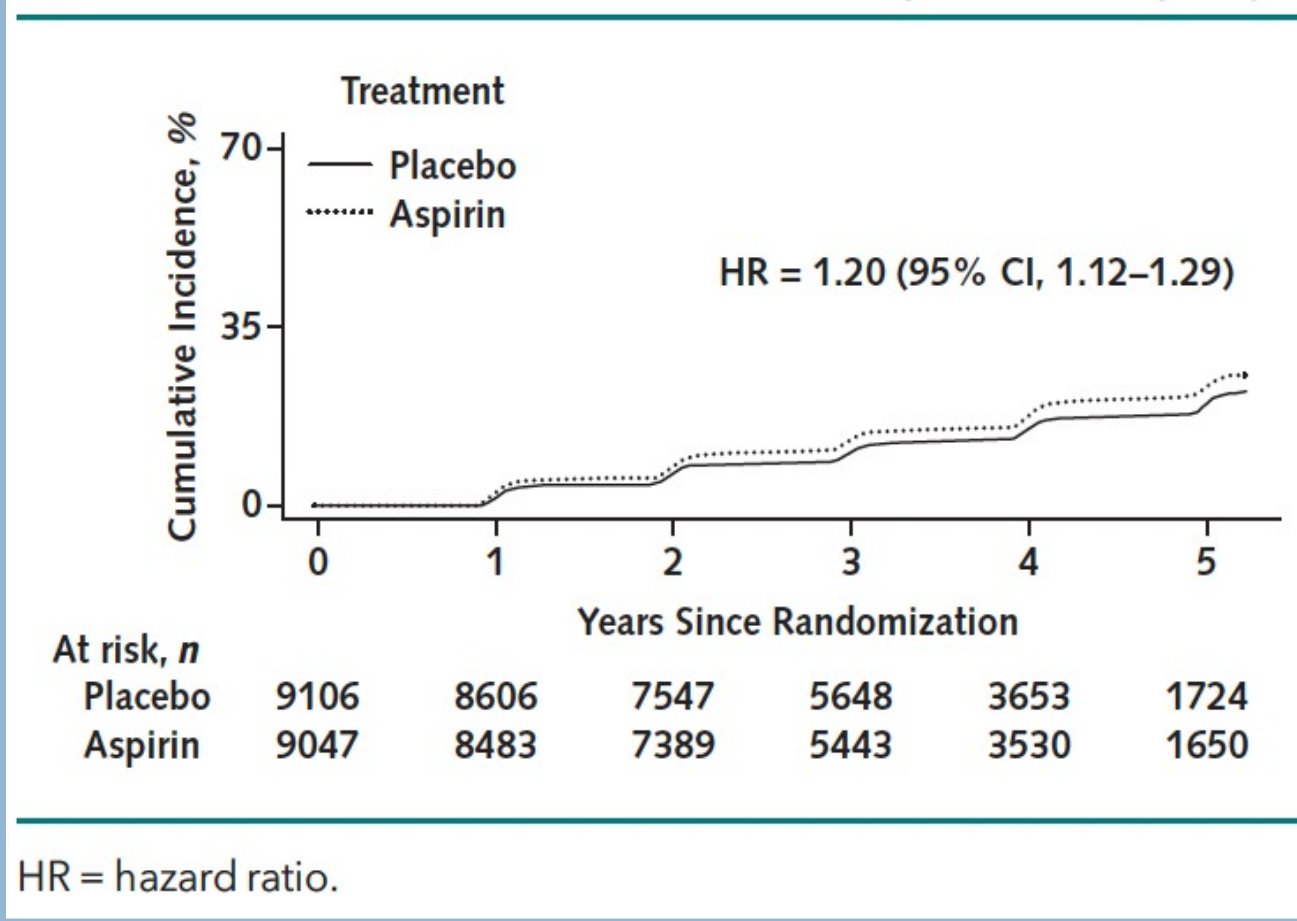


Table. Participant Characteristics at Study Entry

Characteristic	Overall (n = 18 153)*	Placebo (n = 9106)*	Aspirin (n = 9047)*
Age, y	74.0 (71.6–77.6)	73.9 (71.6–77.5)	74.0 (71.6–77.7)
Sex			
Male	7946 (44)	3987 (44)	3959 (44)
Female	10 207 (56)	5119 (56)	5088 (56)
Ethnicity and race			
White–Australia	15 708 (87)	7863 (86)	7845 (87)
White–United States	1028 (5.7)	521 (5.7)	507 (5.6)
Black	712 (3.9)	353 (3.9)	359 (4.0)
Hispanic	449 (2.5)	228 (2.5)	221 (2.4)
Other	244 (1.3)	132 (1.5)	112 (1.2)
Country			
Australia	16 032 (88)	8043 (88)	7989 (88)
United States	2121 (12)	1063 (12)	1058 (12)
Living condition			
At home alone	5864 (32)	2967 (33)	2897 (32)
At home with family, friends, or spouse	12 289 (68)	6139 (67)	6150 (68)
Smoking status			
Current	702 (3.9)	362 (4.0)	340 (3.8)
Former	7435 (41)	3713 (41)	3722 (41)
Never	10 016 (55)	5031 (55)	4985 (55)
Drinking			
Never	3089 (17)	1559 (17)	1530 (17)
Former	1052 (5.8)	534 (5.9)	518 (5.7)
Current	14 012 (77)	7013 (77)	6999 (77)
Cancer history	3438 (19)	1725 (19)	1713 (19)
Previous use of aspirin	1921 (11)	947 (10)	974 (11)
BMI (categorical)			
Normal	4359 (24)	2161 (24)	2198 (24)
Obese	5317 (29)	2678 (30)	2639 (29)
Overweight	8054 (45)	4062 (45)	3992 (44)
Underweight	338 (1.9)	162 (1.8)	176 (2.0)
Waist circumference (categorical)			
Not at risk	8096 (45)	4034 (45)	4062 (45)
At risk	9861 (55)	4971 (55)	4890 (55)
SBP	139 (127–150)	139 (127–151)	139 (127–150)
DBP	77 (71–84)	77 (71–84)	77 (71–84)
eGFR	74 (64–84)	74 (64–85)	74 (64–84)
Chronic kidney disease	4360 (26)	2174 (26)	2186 (26)
Hb	14.2 (13.5–15.0)	14.2 (13.5–15.0)	14.2 (13.4–15.0)
Hypertension†	13 400 (74)	6742 (74)	6658 (74)
Diabetes‡	1865 (10)	928 (10)	937 (10)
Use of NSAID	2134 (12)	1040 (11)	1094 (12)
Use of PPI	4423 (24)	2230 (24)	2193 (24)
Use of SSRIs	975 (5.4)	518 (5.7)	457 (5.1)

Figure 2. Cumulative incidence of anemia by treatment group.



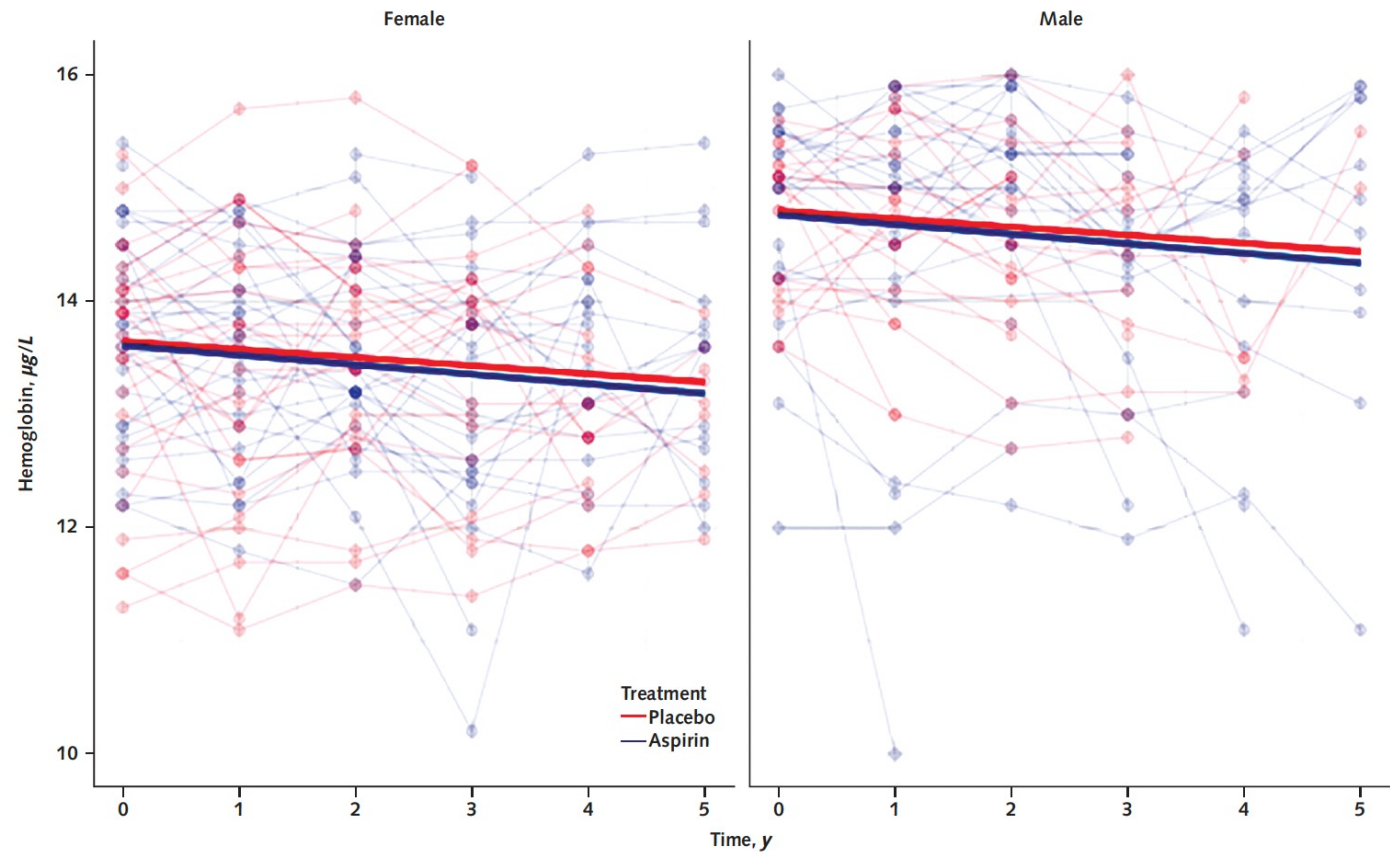
23.5% AAS
20.3% PLACEBO

AAS 20% > riesgo
de anemia

AAS:

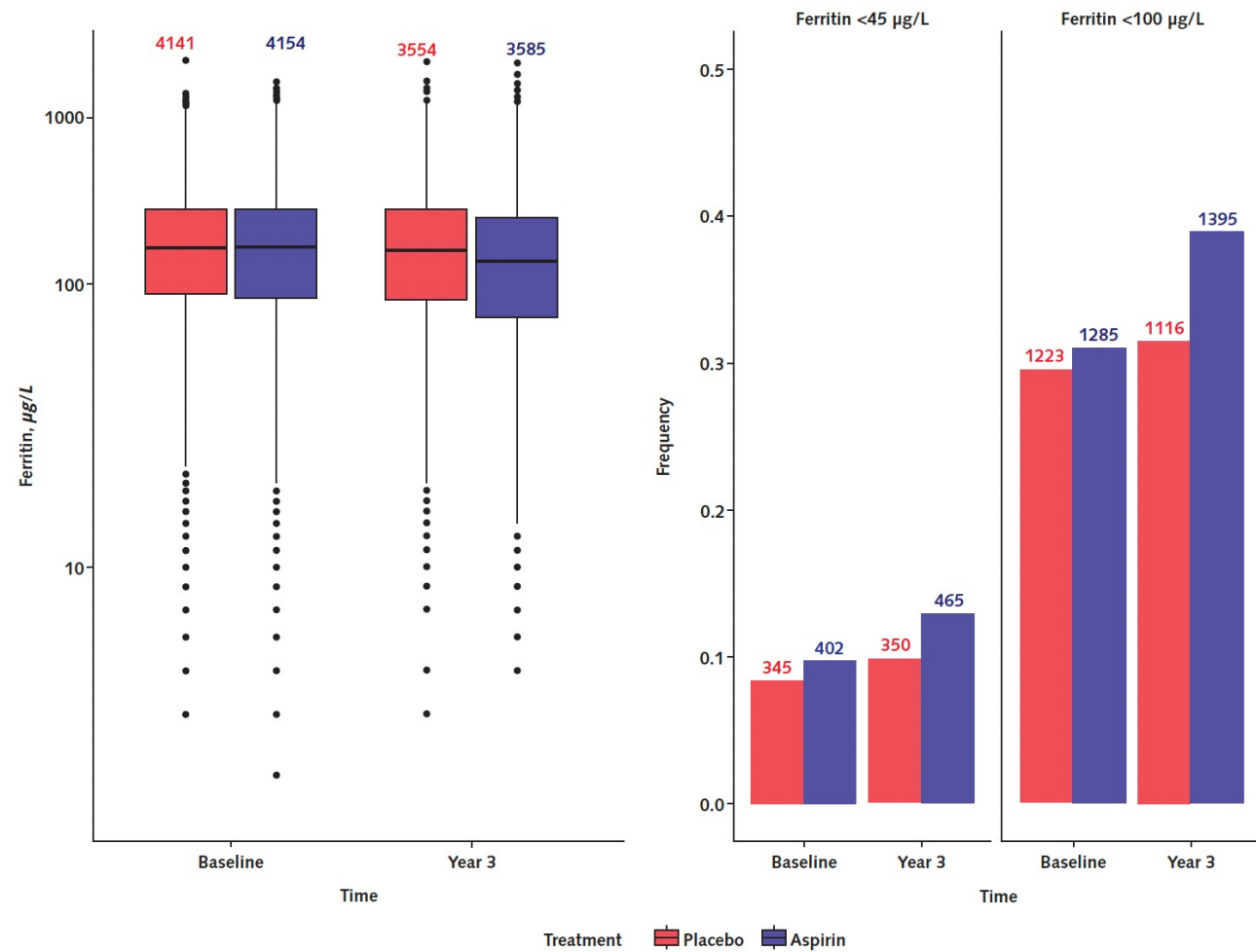
- Hb media inicial 0,4 g/L inferior
- Hb disminución 0,6 g/L cada 5 años

Figure 3. Hemoglobin for males and females by treatment group over time.



Thick lines represent the estimated average trajectory together with the 95% CI; thin colored lines show a random sample of 100 individual trajectories.

Figure 4. Serum ferritin concentration according to treatment allocation at baseline and year 3.



Left. Distribution of serum ferritin in logarithm scale. The annotated numbers represent the number of observations. Right. The proportion of participants with ferritin less than 45 µg/L and less than 100 µg/L. The annotated numbers represent the number of participants.

Ferritina:

- Disminución del 16% AAS frente 3% placebo a los 3 años

■ DISCUSIÓN/CONCLUSIONES

- Se demuestra un >riesgo de *anemia* debido a sangrados menores inducidos por *AAS*.
 - Exposición acumulativa.
- *ANEMIA en ancianos se asocia:*
 - Deterioro funcional
 - Fatiga
 - Discapacidad
 - Depresión
 - Peor supervivencia
 - Mayores pruebas invasivas, costos de atención médica
- *AAS A DOSIS BAJAS DIARIA >RIESGO DE ANEMIA EN 20% debido a pérdida de sangre oculta al disminuir la ferritina.*

Annals of Internal Medicine



The Effect of Low-Dose Glucocorticoids Over Two Years on Weight and Blood Pressure in Rheumatoid Arthritis: Individual Patient Data From Five Randomized Trials

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- Evaluar efectos adversos tras 2 años de tratamiento con GC a dosis bajas en AR.
- GC reducen la actividad de la enfermedad y retardan la progresión del daño articular.
- Análisis agrupado de 5 ensayos controlados aleatorios
 - *intervenciones a los 2 años.*
 - *permiten el tratamiento concomitante con fármacos antirreumáticos modificadores de la enfermedad.*
- 12 países de Europa.

■ MÉTODOS

- *Pacientes con AR temprana y establecida.*
- *Tratamiento con GC a dosis de $\leq 7,5$ mg de Prednisona equivalente por día.*
- ***PESO** y **PAM** medidos.*
- *En 4 ensayos el tratamiento control fue placebo, el 5º fue un FAME.*
- *Resultado 2º el cambio en número de fármacos antiHTA.*



■ RESULTADOS: 1.112 pacientes (GC 548/control 564)

Characteristic	Boers et al., 2022 (1) (n = 451; Oral Prednisolone, 5 mg/d)	Choy et al., 2005 (13) (n = 91; Subcutaneous Methylprednisolone, 120 mg/mo)	Kirwan, 1995 (2) (n = 128; Oral Prednisolone, 7.5 mg/d)	Svensson et al., 2005 (15) (n = 250; Oral Prednisolone, 7.5 mg/d)	Wassenberg et al., 2005 (14) (n = 192; Oral Prednisolone, 5 mg/d)
Median age (IQR), y	72 (68-76)	58 (12)††	48 (42-58)	56 (46-66)	56 (41-62)
Women, n (%)	317 (70)	71 (78)‡	81 (63)	159 (64)	134 (70)
Seropositivity, n (%)					
ACPA positive	253 (64)	NA	NA	149 (64)	NA
RF positive	299 (68)	47 (59)‡§	102 (86)	163 (66)	103 (54)
Smoking status, n (%)					
Never	221 (49)	NA	NA	92 (37)	NA
Current	62 (14)	NA	NA	76 (31)	NA
Previous	166 (37)	NA	NA	81 (33)	NA
Mean BMI (SD), kg/m ²	27.3 (4.5)	NA	NA	25.8 (4.2)	25.7 (4.5)
Mean DAS28 score (SD)	4.52 (1.05)	5.39 (1.29)	NA	5.35 (1.08)	NA
Median disease duration (IQR), y	7.0 (3-15)	14 (9)††	1.3 (0.29)††	0.5 (0.3-0.7)	0.5 (0.3-0.1)
Mean pain score (SD)	5.5 (2.4)	4.6 (2.4)	4.8 (2.5)	4.8 (2.2)	5.7 (2.2)
Median ESR (IQR), mm/h	25.0 (14-40)	26.0 (11-40.5)	45.0 (26-60)	32.5 (18-52)	38.0 (24-60)
Median CRP (IQR), mg/L	5.0 (2.7-13.7)	11.1 (5-28.2)	19.0 (10-36)	23.0 (10-52)	NA
Median HAQ score (IQR)	1.25 (0.63-1.75)	1.75 (1-2)¶	1.3 (0.7-1.8)	1.0 (0.5-1.4)	NA**
Mean weight (SD), kg	74.8 (13.5)	71.0 (21.7)	69.2 (13.7)	74.0 (13.9)	72.2 (14.2)
Mean MAP (SD), mm Hg	98.7 (11.6)	93.8 (11.7)	98.4 (12.6)	NA	95.2 (10.8)
Mean systolic blood pressure (SD), mm Hg	138.4 (19.6)	129.6 (21.1)	131.1 (19.4)	NA	128.0 (16.3)
Mean diastolic blood pressure (SD), mm Hg	78.8 (10.0)	75.9 (9.0)	82.1 (10.8)	NA	78.7 (9.5)
Median number of antihypertensive drugs (IQR)	1 (0-2)	NA	0 (0-0)	NA	NA

ACPA = antibody citrullinated protein antibodies; BMI = body mass index; CRP = C-reactive protein; DAS28 = Disease Activity Score-28 joints; ESR = erythrocyte sedimentation rate; HAQ = Health Assessment Questionnaire; IQR = interquartile range; MAP = mean arterial pressure; NA = not available; RF = rheumatoid factor.

* Values are based on individual participant data that were available to the study team unless otherwise stated.

† Value is mean (SD).

‡ Numbers not available on an individual level (extracted from published aggregate data).

§ Rheumatoid factor status known in 80 persons.

|| Positive latex agglutination test.

¶ Modified HAQ was used in this study.

** The Hannover Functional Ability Questionnaire was used in this study to evaluate disability.

Table 2. Changes in Weight, Blood Pressure, and Number of Antihypertensive Drugs in the Glucocorticoid and Control Groups*

Outcome	Patients, <i>n</i>	Glucocorticoid Group†	Patients, <i>n</i>	Control Group†	Contrast‡	P Value
Weight, kg	548	1.8 (0.8)	564	0.7 (0.8)	1.1 (0.4 to 1.8)	<0.001
MAP, mm Hg	429	2.3 (1.3)	433	2.7 (1.4)	−0.4 (−3.0 to 2.2)	0.187
Systolic blood pressure, mm Hg	429	2.9 (2.0)	433	3.9 (2.7)	−0.9 (−7.8 to 5.9)	0.062
Diastolic blood pressure, mm Hg	429	1.8 (1.3)	433	2.0 (1.3)	−0.1 (−1.6 to 1.3)	0.72
Number of antihypertensive drugs§	276	0 (0 to 0)	282	0 (0 to 0)	0 (0 to 0)	

MAP = mean arterial pressure.

* Heterogeneity and inconsistency measures from standard meta-analyses corresponded to $I^2 = 0\%$ for weight and $I^2 = 0\%$ for MAP; see Supplement Figure 7 (available at Annals.org).

† Values are least-squares mean changes (SE).

‡ Differences in least-squares mean changes (95% CIs).

§ Nonnormal distribution: The group estimates are median changes (inner quartiles), and effect estimate is the median of differences between the 2 groups with corresponding 95% CIs, with no imputation for missing data and ignoring the grouping within studies. Analysis on the studies separately, and separate analyses on each imputed data set showed similar results.

|| In line with the study protocol, no significance test was done for this secondary outcome.

Table 3. Subgroup Analyses Comparing the Effects of Glucocorticoid Dosage (5 vs. 7.5 mg/d)* and Way of Administration (Oral vs. Subcutaneous)

Subgroup	Patients, <i>n</i>	Glucocorticoid Group†	Patients, <i>n</i>	Control Group†	Contrast‡
Weight, kg					
Trials with 5 mg of glucocorticoids per day	368	0.9 (0.9)	366	−0.1 (0.9)	1.0 (0.2 to 1.9)
Trials with 7.5 mg of glucocorticoids per day	180	3.3 (0.8)	198	2.1 (0.8)	1.2 (0.3 to 2.2)
Trials with oral glucocorticoids	500	2.5 (0.6)	521	1.3 (0.7)	1.2 (0.6 to 1.9)
Trials with subcutaneous glucocorticoids	48	−1.2 (0.8)	43	−0.8 (0.8)	−0.4 (−2.8 to 2.0)
Mean arterial pressure, mm Hg					
Trials with 5 mg of glucocorticoids per day	368	2.1 (1.5)	366	2.0 (1.7)	0.1 (−2.8 to 2.9)
Trials with 7.5 mg of glucocorticoids per day	61	1.8 (1.6)	67	4.9 (1.7)	−3.1 (−7.6 to 1.5)
Trials with oral glucocorticoids	381	2.2 (1.6)	390	2.8 (1.7)	−0.6 (−3.3 to 2.1)
Trials with subcutaneous glucocorticoids	48	4.0 (2.6)	43	2.8 (2.2)	1.2 (−5.6 to 8.0)

* Glucocorticoid dosage is in prednisone equivalent units.

† Values are least-squares mean changes (SE).

‡ Differences in least-squares mean changes (95% CIs).

■ DISCUSIÓN/CONCLUSIONES

- Los pacientes que recibieron **GC** en dosis bajas ganaron aprox. **1 kg** de peso.
- No hay evidencia de efectos de GC en la **PA** o en el número de fármacos antiHTA.
- GC tienen un efecto sobre la actividad de la enfermedad y la progresión radiográfica incluso en dosis bajas.
- El riesgo de exacerbación es menor en pacientes con GC a dosis bajas vs sin tratamiento GC con toxicidad poco clara.
- Limitaciones:
 - Ensayos en Europa, difícil generalizar.
 - Pacientes muy seleccionados.
 - Heterogeneidad entre los 5 ensayos.
 - Desconocemos tasas de abandono.
 - Medición de PA no protocolizada.





¡MUCHAS GRACIAS!