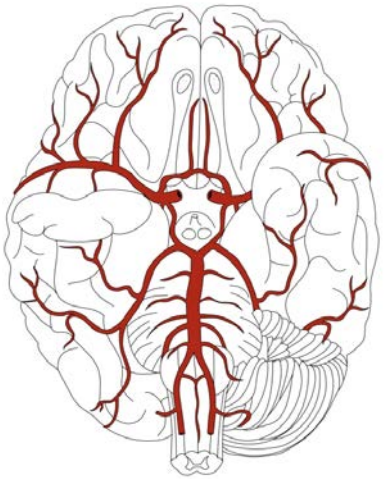
Grupo
Hospital de Sant Pau

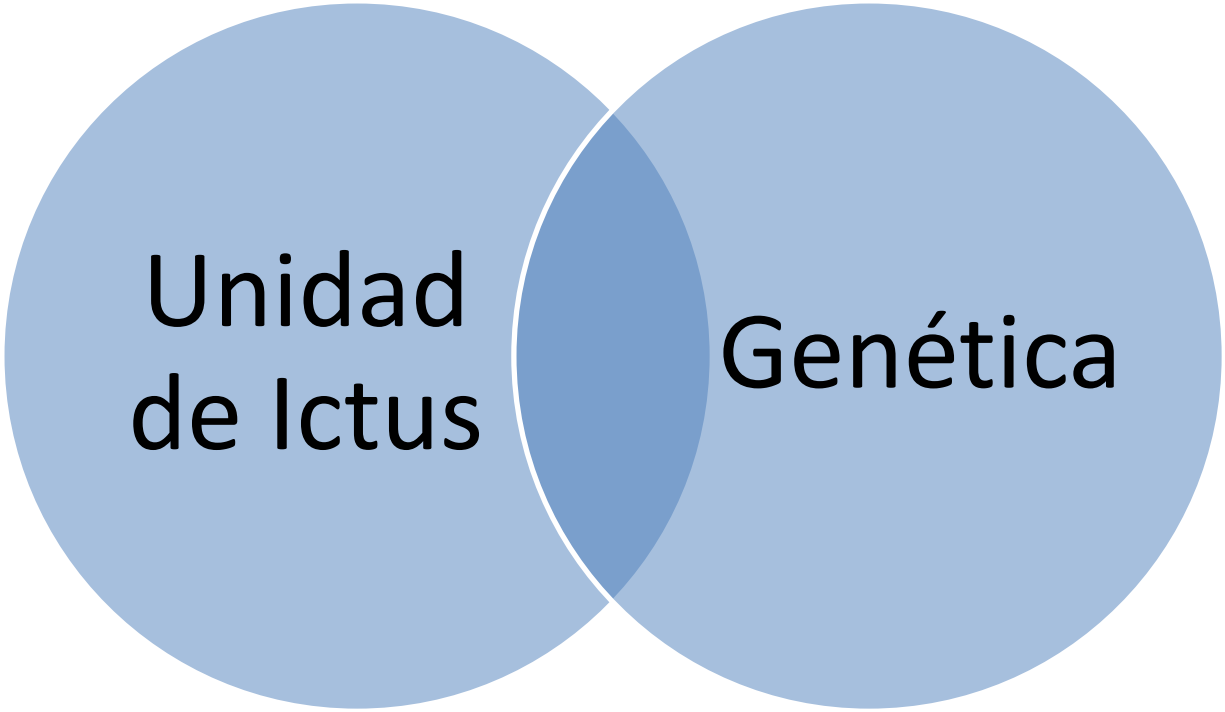


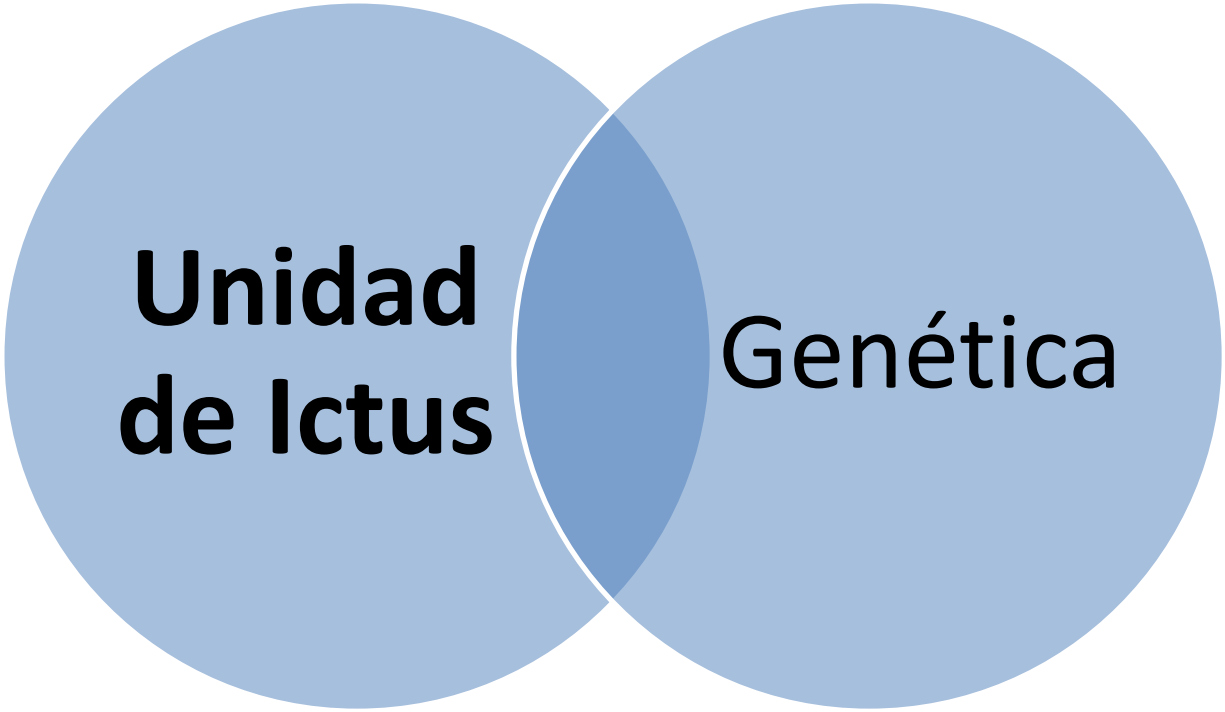
IP: Joan Martí Fàbregas
(Servicio de Neurología)
Israel Fernández Cadenas
(Farmacogenòmica i Genètica Neurovascular)

Institut

sant pau

Investigació Biomèdica | Barcelona


Unidad
de Ictus
Genética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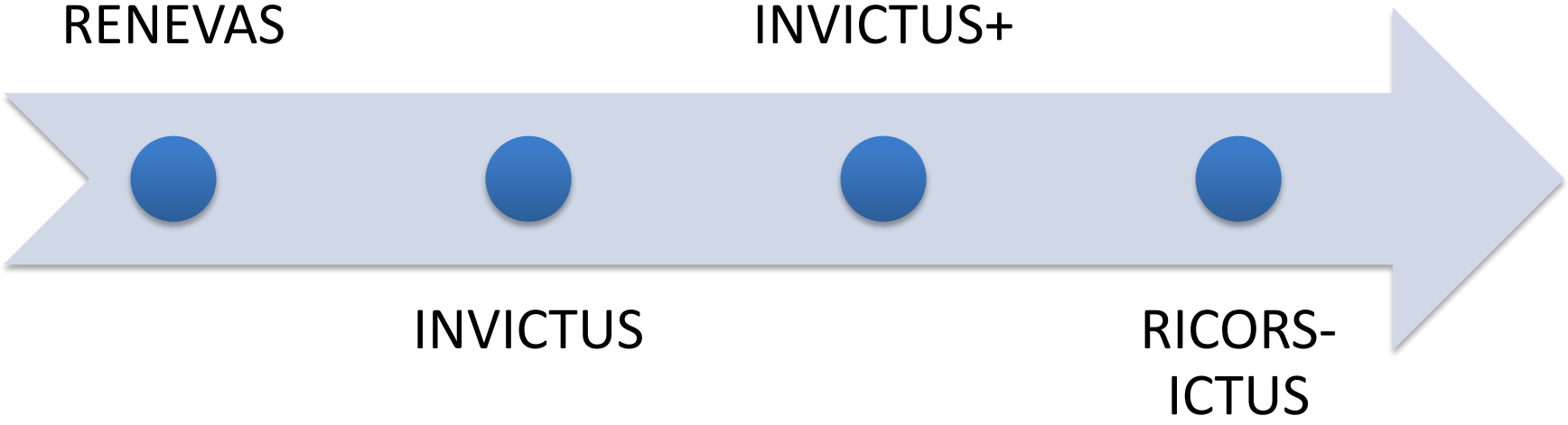
Genética


RENEVAS
INVICTUS+
INVICTUS
RICORS-
ICTUS

Composición 2022 del grupo

- **IP**: Joan Martí Fàbregas
- **Neurólogos plantilla**
  - Pol Camps Renom
  - Luis Prats Sánchez
  - Alejandro Martínez Domeño
  - Anna Ramos Pachón
- **Coordinadora investigación y ensayos clínicos**
  - Rebeca Marín Bueno

- **Neurólogos colaboradores**
  - Artur Izquierdo (Medicina Personalizada)
  - Marina Guasch (Río Hortega)
  - Daniel Guisado (Intensificación)
- **Laboratorio de investigación neurovascular**
  - Ana Aguilera Simon

Proyectos de investigación vigentes

Proyecto
RICORS
Investigación Clínica Independiente
Medicina personalizada
FIS (x3)
Marató TV3 (x3)
Intensificación
Fundación ictus

Ictus isquémico

Tratamientos de reperfusión

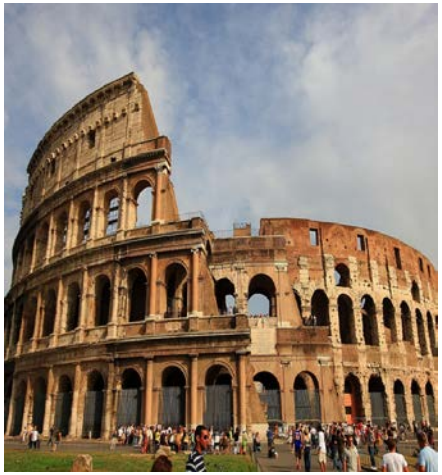
Vulnerabilidad de la placa carotídea

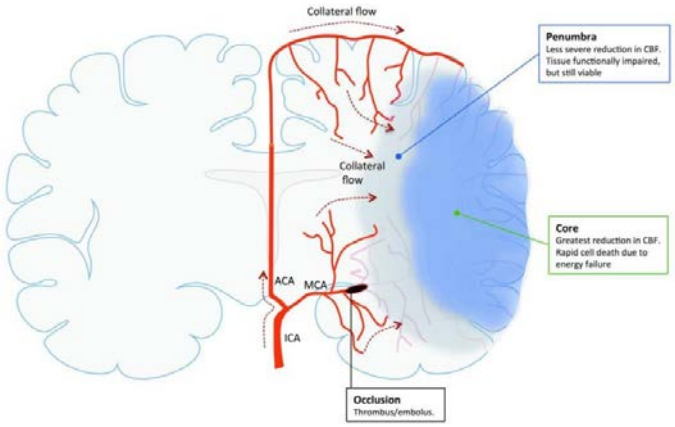
Carotid web

GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES
Instituto de Salud Carlos III
Subdirección General de Evaluación y Fomento de la Investigación
Unión Europea
Fondo Europeo de Desarrollo Regional
"Una manera de hacer Europa"
2019
Application No.: PI19/0085

La Paz (Madrid)
H Valladolid
H del Mar (Barcelona)
H Virgen del Rocío (Sevilla)
H Cruces (Bilbao)
H La Princesa (Madrid)

n >400





C
O
Llaterals in
Ischemic
Stroke treated with
Endovasc
Ular
tro**M**bectomy

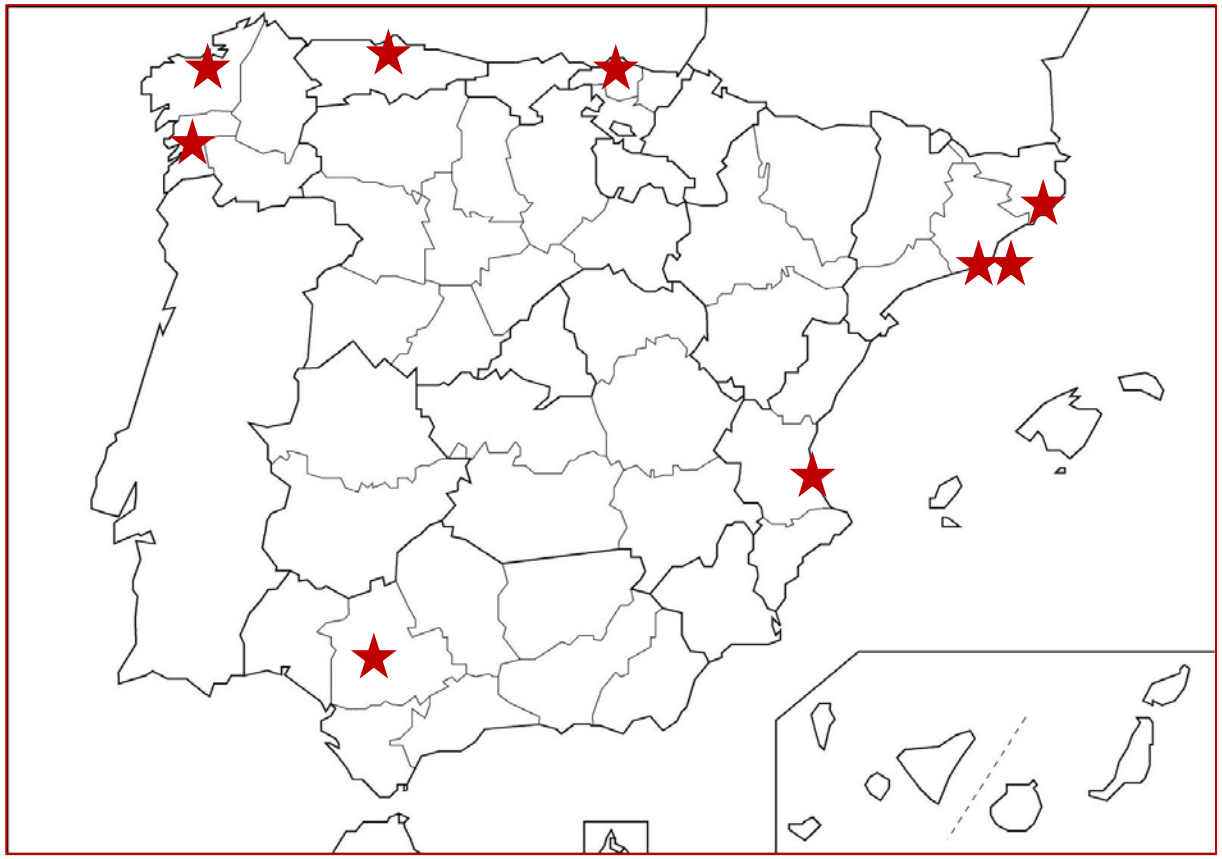
HOSPITAL DE LA SANTA CREU I SANT PAU
FUNDACIÓ DE GESTIÓ SANITÀRIA
UNIVERSITAT AUTÒNOMA DE BARCELONA

A randomized trial on **H**emodynamic **O**ptimization of cerebral **P**erfusion after **E**ndovascular therapy in patients with acute ischemic stroke (HOPE study)

Institut santpau
Investigació Biomèdica | Barcelona

HOPE Improving cerebral perfusion after stroke

GOBIERNO DE ESPAÑA MINISTERIO DE ECONOMÍA Y COMPETITIVIDAD
Instituto de Salud Carlos III



Centres participants:

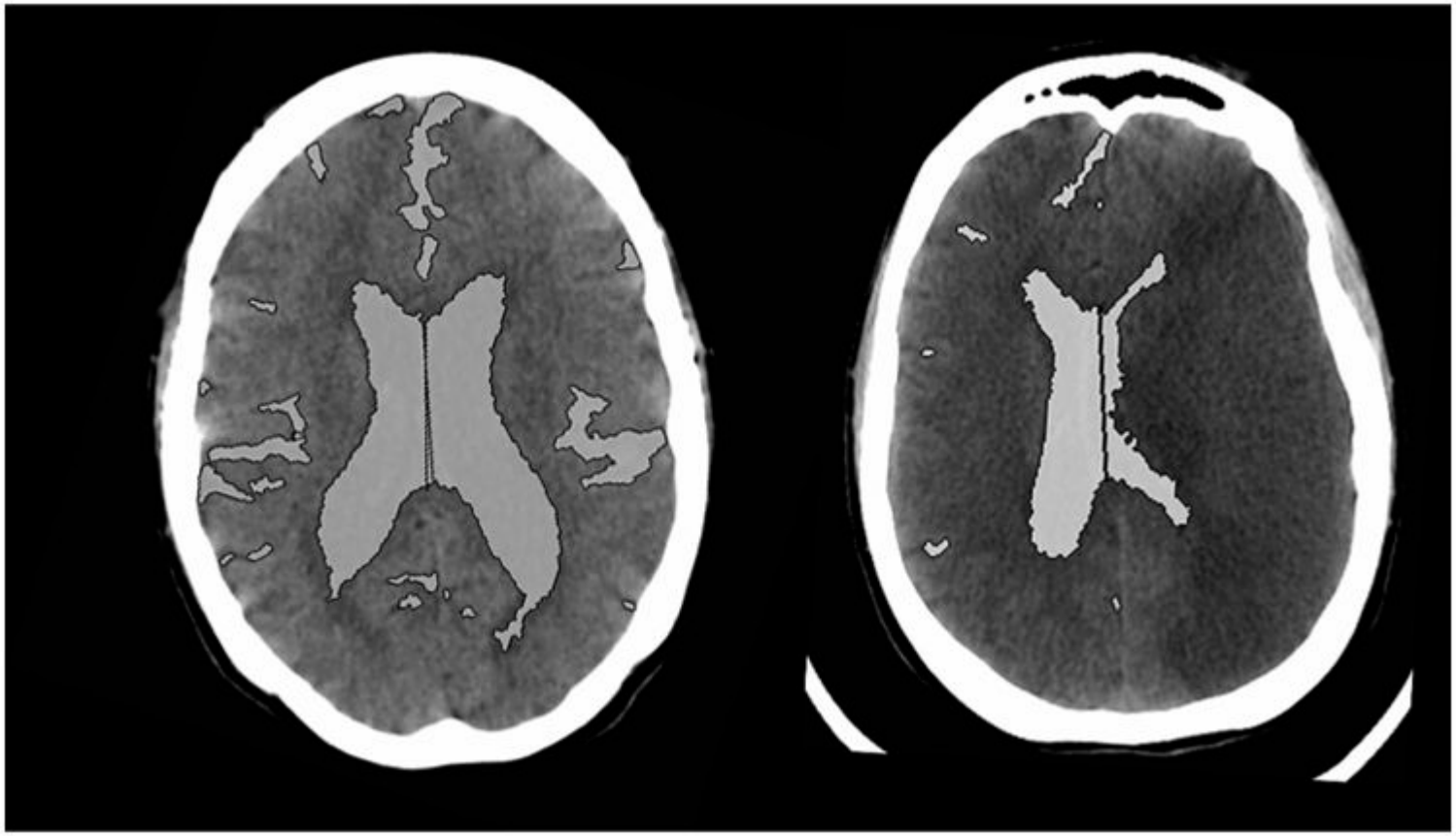
- Hospital de la Santa Creu i Sant Pau (CAT)
- Hospital del Mar (CAT)
- Hospital Josep Trueta (CAT)
- Hospital Universitario Virgen del Rocío (AND)
- Hospital Universitario A Coruña (GAL)
- Hospital Universitario Santiago de Compostela (GAL)
- Hospital Cruces (EUS)
- Hospital La Fe de València (VAL)
- Hospital Central de Asturias (AST)

HOPE Improving cerebral perfusion after stroke

+

Zaragoza
Alicante
Tarragona
Murcia

Daño por reperfusión
Edema



CSF Volumetric Analysis for Quantification of Cerebral Edema After Hemispheric Infarction
Rajat Dhar et al

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UNIÓN EUROPEA
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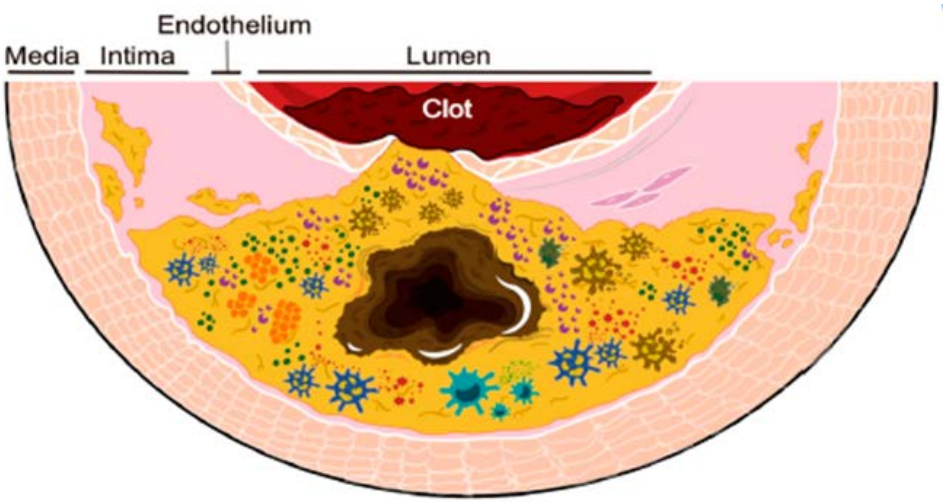
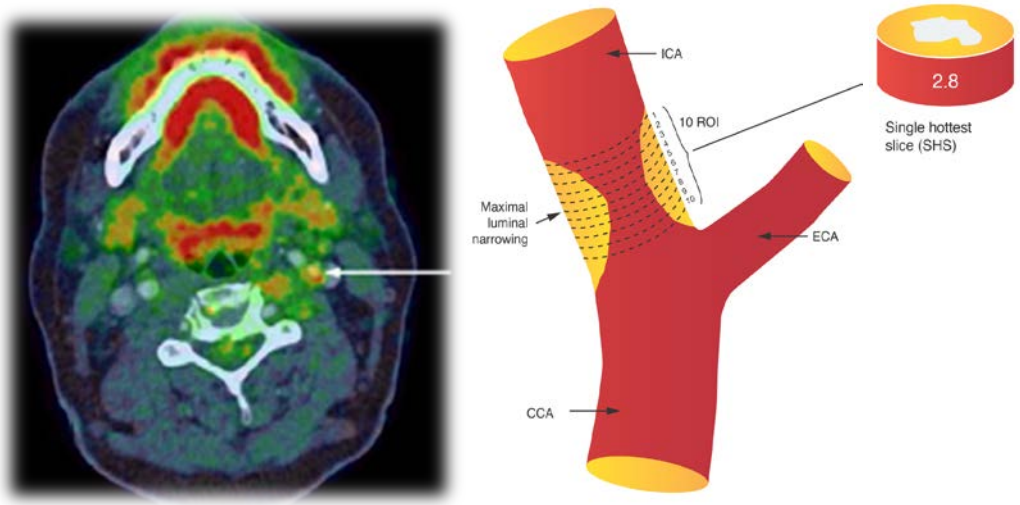
GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA E INNOVACIÓN
Instituto de Salud Carlos III
La Marató 3



Marcadores asociados a la vulnerabilidad de la placa aterosclerótica carotídea

Institut sant pau
Investigació Biomèdica | Barcelona
HOSPITAL DE LA SANTA CREU I SANT PAU
FUNDACIÓ DE GESTIÓ SANITÀRIA
UNIVERSITAT AUTÒNOMA DE BARCELONA



Original Contribution

Carotid Plaque Inflammation Imaged by ^{18}F-Fluorodeoxyglucose Positron Emission Tomography and Risk of Early Recurrent Stroke

Peter J. Kelly, MD; Pol Camps-Renom, MD; Nicola Giannotti, BSc; Joan Martí-Fàbregas, MD; Sean Murphy, MD; Jonathan McNulty, PhD; Mary Barry, MD; Patrick Barry, MD; David Calvet, MD; Shelagh B. Coutts, MD; Simon Cronin, PhD; Raquel Delgado-Mederos, MD; Eamon Dolan, MD; Alejandro Fernández-León, MD; Shane Foley, PhD; Joseph Harbison, MD; Gillian Horgan, BSc; Eoin Kavanagh, MD; Michael Marnane, PhD; Ciaran McDonnell, MD; Martin O'Donohoe, MD; Vijay Sharma, MD; Cathal Walsh, PhD; David Williams, PhD; Martin O'Connell, MD

Background and Purpose—Plaque inflammation contributes to stroke and coronary events. ^{18}F-fluorodeoxyglucose (FDG) positron emission tomography (PET) identifies plaque inflammation-related metabolism. Almost no prospective data exist on the relationship of carotid ^{18}F-FDG uptake and early recurrent stroke.

Methods—We did a multicenter prospective cohort study BIOVASC (Biomarkers/Imaging Vulnerable Atherosclerosis in Symptomatic Carotid disease) of patients with carotid stenosis and recent stroke/transient ischemic attack with 90-day follow-up. On coregistered carotid ^{18}F-FDG PET/computed tomography angiography, ^{18}F-FDG uptake was expressed as maximum standardized uptake value (SUV_{max}) in the axial single hottest slice. We then conducted a systematic review of similar studies and pooled unpublished individual-patient data with 2 highly similar independent studies (Dublin and Barcelona). We analyzed the association of SUV_{max} with all recurrent nonprocedural stroke (before and after PET) and with recurrent stroke after PET only.

Results—In BIOVASC (n=109, 14 recurrent strokes), after adjustment (for age, sex, stenosis severity, antiplatelets, statins, diabetes mellitus, hypertension, and smoking), the hazard ratio for recurrent stroke per 1 g/mL SUV_{max} was 2.2 (CI, 1.1–4.5; P=0.025). Findings were consistent in the independent Dublin (n=52, hazard ratio, 2.2; CI, 1.1–4.3) and Barcelona studies (n=35, hazard ratio, 2.8; CI, 0.98–5.5). In the pooled cohort (n=196), 37 recurrent strokes occurred (29 before and 8 after PET). Plaque SUV_{max} was higher in patients with all recurrence (P<0.0001) and post-PET recurrence (P=0.009). The fully adjusted hazard ratio of any recurrent stroke was 2.19 (CI, 1.41–3.39; P<0.001) and for post-PET recurrent stroke was 4.57 (CI, 1.5–13.96; P=0.008). Recurrent stroke risk increased across SUV_{max} quartiles (log-rank P=0.003). The area under receiver operating curve for all recurrence was 0.70 (CI, 0.59–0.78) and for post-PET recurrence was 0.80 (CI, 0.64–0.96).

Conclusions—Plaque inflammation-related ^{18}F-FDG uptake independently predicted future recurrent stroke post-PET. Although further studies are needed, ^{18}F-FDG PET may improve patient selection for carotid revascularization and suggest that anti-inflammatory agents may have benefit for poststroke vascular prevention. (***Stroke***. **2019;50:00-00. DOI: 10.1161/STROKEAHA.119.025422.**)

Key Words: angiography ■ atherosclerosis ■ inflammation ■ metabolism ■ stroke

La inflamación de las placas de ateroma carotídeas medida con PET-FDG predice el riesgo de recurrencia en pacientes con ictus isquémico reciente

A Risk Score Including Carotid Plaque Inflammation and Stenosis Severity Improves Identification of Recurrent Stroke

Peter J. Kelly, MD; Pol Camps-Renom, MD; Nicola Giannotti, PhD; Joan Martí-Fàbregas, MD; Jonathan P. McNulty, PhD; Jean-Claude Baron, MD; Mary Barry, MD; Shelagh B. Coutts, MD; Simon Cronin, PhD; Raquel Delgado-Mederos, MD; Eamon Dolan, MD; Alejandro Fernández-León, PhD; Shane Foley, PhD; Joseph Harbison, MD; Gillian Horgan, BSc; Eoin Kavanagh, MD; Michael Marnane, PhD; John McCabe, MB; Ciaran McDonnell, MD; Vijay K. Sharma, MD; David J. Williams, PhD; Martin O'Connell, MD; Sean Murphy, MD

Background and Purpose—In randomized trials of symptomatic carotid endarterectomy, only modest benefit occurred in patients with moderate stenosis and important subgroups experienced no benefit. Carotid plaque ^{18}F-fluorodeoxyglucose uptake on positron emission tomography, reflecting inflammation, independently predicts recurrent stroke. We investigated if a risk score combining stenosis and plaque ^{18}F-fluorodeoxyglucose would improve the identification of early recurrent stroke.

Methods—We derived the score in a prospective cohort study of recent (<30 days) non-severe (modified Rankin Scale score ≤3) stroke/transient ischemic attack. We derived the SCAIL (symptomatic carotid atheroma inflammation lumen-stenosis) score (range, 0–5) including ^{18}F-fluorodeoxyglucose standardized uptake values (SUV_{max} <2 g/mL, 0 points; SUV_{max} 2–2.99 g/mL, 1 point; SUV_{max} 3–3.99 g/mL, 2 points; SUV_{max} ≥4 g/mL, 3 points) and stenosis (<50%, 0 points; 50%–69%, 1 point; ≥70%, 2 points). We validated the score in an independent pooled cohort of 2 studies. In the pooled cohorts, we investigated the SCAIL score to discriminate recurrent stroke after the index stroke/transient ischemic attack, after positron emission tomography-imaging, and in mild or moderate stenosis.

Results—In the derivation cohort (109 patients), recurrent stroke risk increased with increasing SCAIL score (P=0.002, C statistic 0.71 [95% CI, 0.56–0.86]). The adjusted (age, sex, smoking, hypertension, diabetes mellitus, antiplatelets, and statins) hazard ratio per 1-point SCAIL increase was 2.4 (95% CI, 1.2–4.5, P=0.01). Findings were confirmed in the validation cohort (87 patients, adjusted hazard ratio, 2.9 [95% CI, 1.9–5], P<0.001; C statistic 0.77 [95% CI, 0.67–0.87]). The SCAIL score independently predicted recurrent stroke after positron emission tomography-imaging (adjusted hazard ratio, 4.52 [95% CI, 1.58–12.93], P=0.005). Compared with stenosis severity (C statistic, 0.63 [95% CI, 0.46–0.80]), prediction of post-positron emission tomography stroke recurrence was improved with the SCAIL score (C statistic, 0.82 [95% CI, 0.66–0.97], P=0.04). Findings were confirmed in mild or moderate stenosis (adjusted hazard ratio, 2.74 [95% CI, 1.39–5.39], P=0.004).

Conclusions—The SCAIL score improved the identification of early recurrent stroke. Randomized trials are needed to test if a combined stenosis-inflammation strategy improves selection for carotid revascularization where benefit is currently uncertain. (***Stroke***. **2020;51:838-845. DOI: 10.1161/STROKEAHA.119.027268.**)

Key Words: diabetes mellitus ■ endarterectomy ■ hypertension ■ inflammation ■ positron emission tomography

*La combinación del grado de estenosis y la inflamación de las placas de ateroma carotídeas en una escala predictiva (**SCAIL**) mejora la predicción del riesgo de recurrencia*

1. *Marcadores Inflamatorios*
2. *Marcadores Lipoproteicos*

International Journal of *Molecular Sciences*

MDPI

Review

Search for Reliable Circulating Biomarkers to Predict Carotid Plaque Vulnerability

Núria Puig [1,2], Elena Jiménez-Xarrié [3,*], Pol Camps-Renom [3,*] and Sonia Benitez [2,*]

1 Department of Biochemistry and Molecular Biology, Faculty of Medicine, Building M, Autonomous University of Barcelona (UAB), 08193 Cerdanyola del Vallès, Barcelona, Spain; npuigg@santpau.cat
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3 Stroke Unit, Department of Neurology, Hospital de la Santa Creu i Sant Pau (IIB-Sant Pau), 08041 Barcelona, Spain
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Received: 2 October 2020; Accepted: 1 November 2020; Published: 3 November 2020

check for updates

cells

MDPI

Article

Electronegative LDL Promotes Inflammation and Triglyceride Accumulation in Macrophages

Núria Puig [1,2], Lara Montolio [1], Pol Camps-Renom [3], Laia Navarra [1], Francesc Jiménez-Altayó [4], Elena Jiménez-Xarrié [3,*], Jose Luis Sánchez-Quesada [1,5,*] and Sonia Benitez [1,*]

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2 Department of Biochemistry and Molecular Biology, Faculty of Medicine, Building M, Universitat Autònoma de Barcelona (UAB), 08193 Cerdanyola del Vallès, Barcelona, Spain
3 Stroke Unit, Department of Neurology, Hospital de la Santa Creu i Sant Pau, and IIB-Sant Pau, 08041 Barcelona, Spain; pcamps@santpau.cat
4 Departament of Pharmacology. Neuroscience Institute. Faculty of Medicine, UAB, 08193 Cerdanyola del Vallès, Barcelona, Spain; francesc.jimenez@uab.cat
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Translational Stroke Research
https://doi.org/10.1007/s12975-022-01002-x

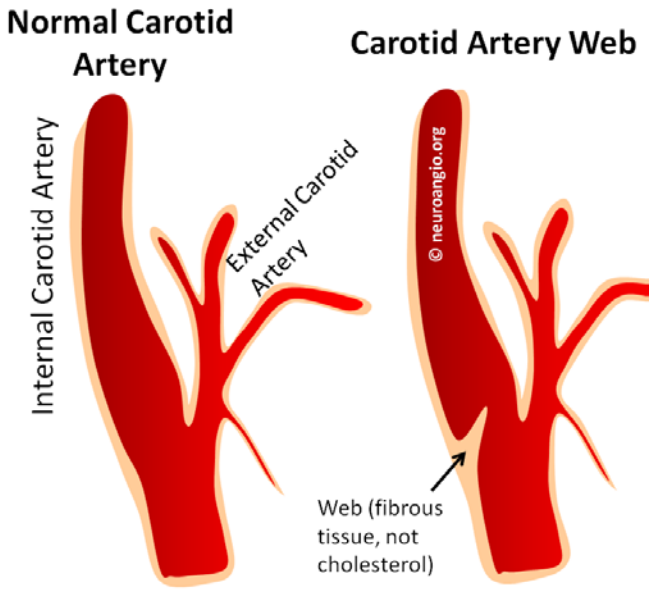
ORIGINAL ARTICLE

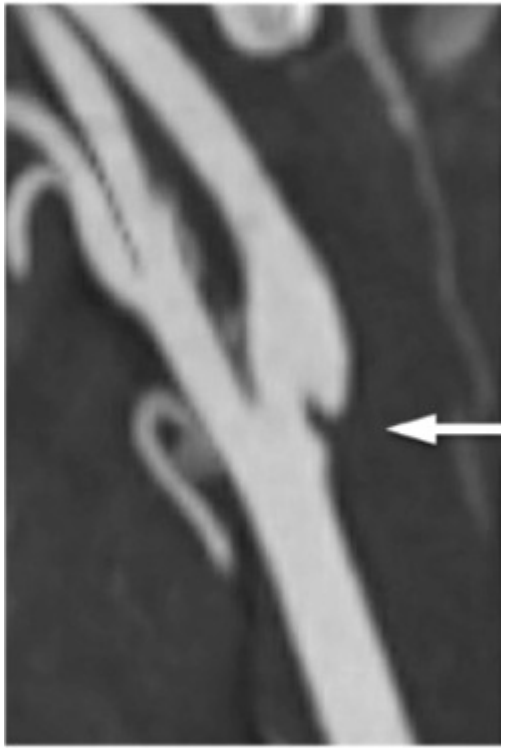
Plasma sICAM-1 as a Biomarker of Carotid Plaque Inflammation in Patients with a Recent Ischemic Stroke

Núria Puig[1,2] · Pol Camps-Renom[3] · Mercedes Camacho[4] · Ana Aguilera-Simón[3] · Francesc Jiménez-Altayó[5] · Alejandro Fernández-León[6] · Rebeca Marín[3] · Joan Martí-Fàbregas[3] · Jose Luis Sánchez-Quesada[1,7] · Elena Jiménez-Xarrié[3] · Sonia Benitez[1]

Received: 19 October 2021 / Revised: 24 January 2022 / Accepted: 23 February 2022

Registro carotid web



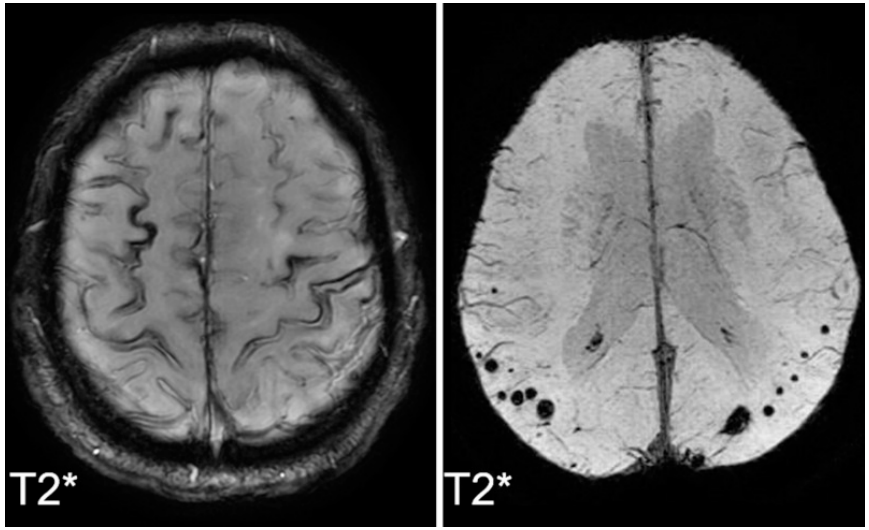


Hemorragia intracerebral

Estudios internacionales (Microbleed International Collaborative Network)

- Influencia de las **estatinas** en el riesgo de ictus isquémico, hemorragia cerebral y muerte durante el seguimiento de pacientes con ictus y microsangrados

- Eventos cerebrovasculares y tratamiento antitrombótico en pacients con **siderosis superfical cortical**



Anticoagular a pacientes con HIC y FA?

ENRICH-AF

- EdoxabaN foR IntraCranial Hemorrhage survivors with Atrial Fibrillation
  - November 14, 2019

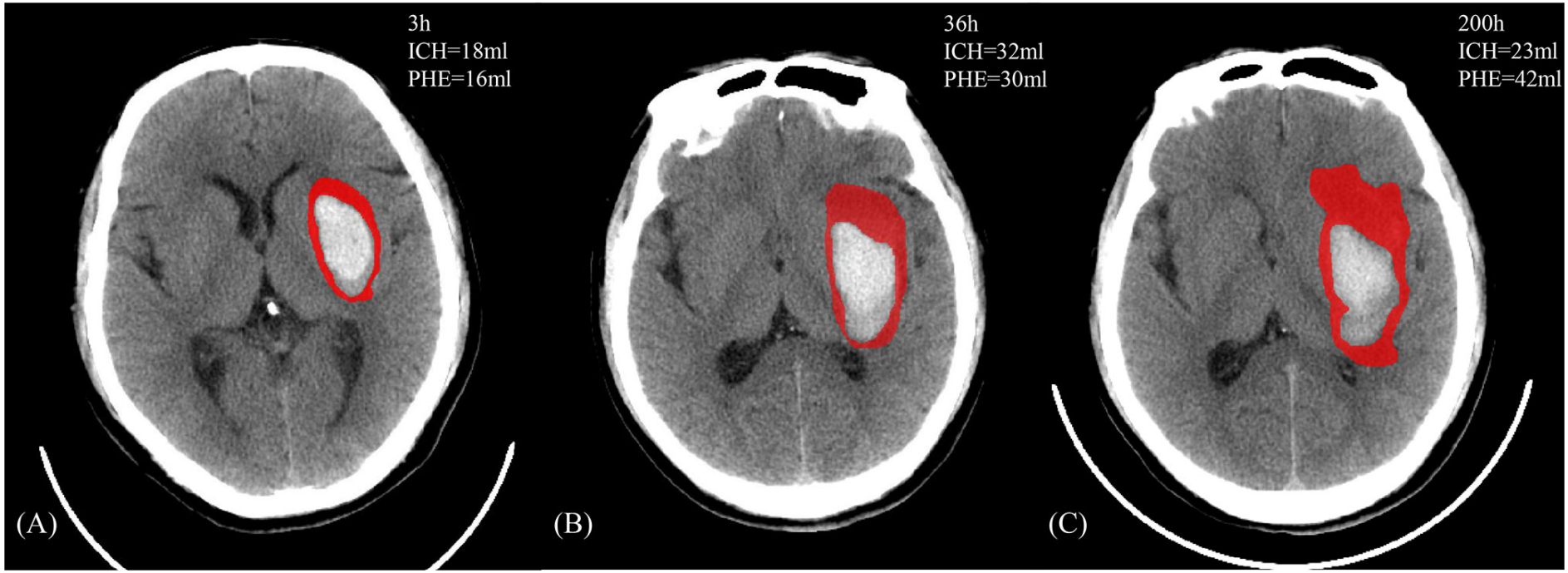
Population Health Research Institute
HEALTH THROUGH KNOWLEDGE

Hamilton Health Sciences

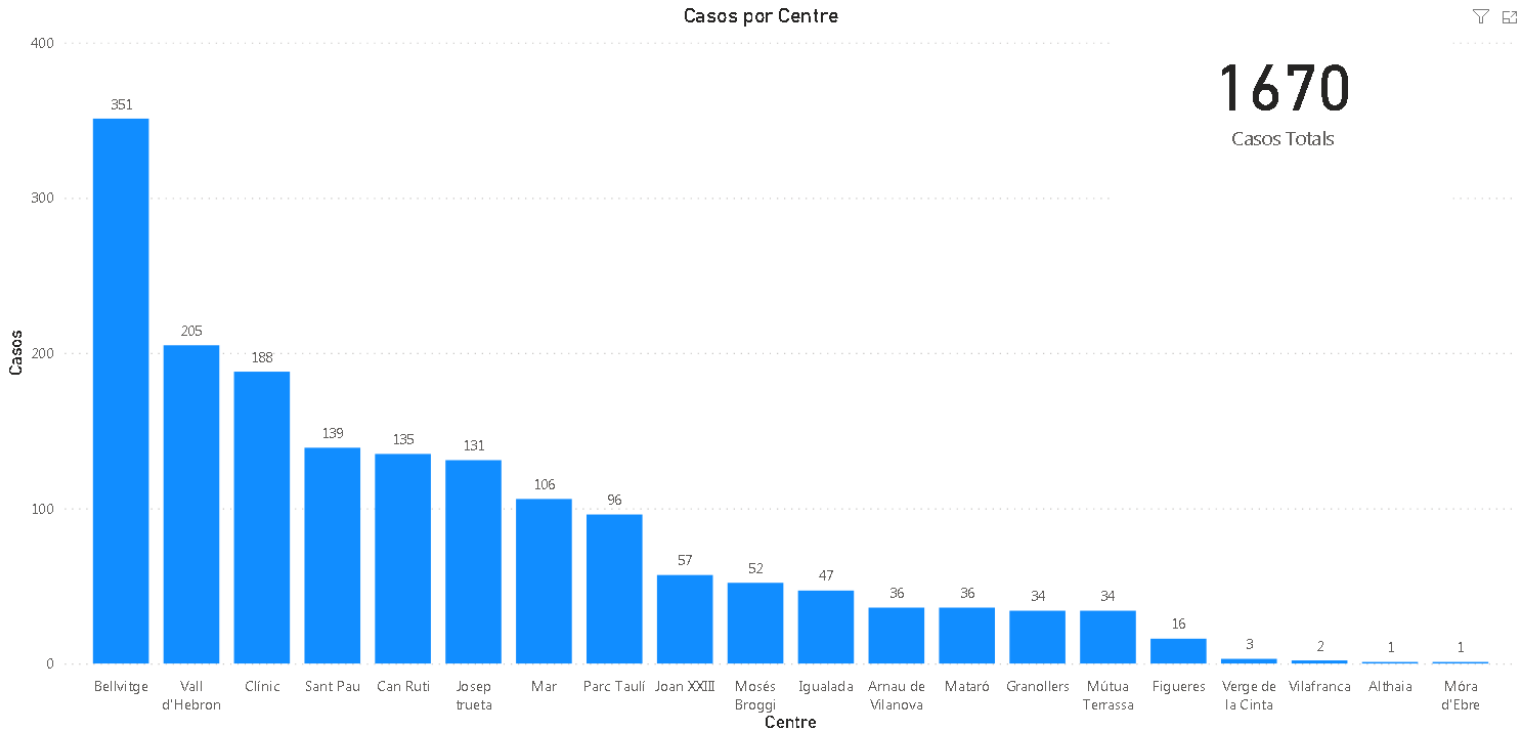
McMaster University
HEALTH SCIENCES

Statins use in ICH Patients

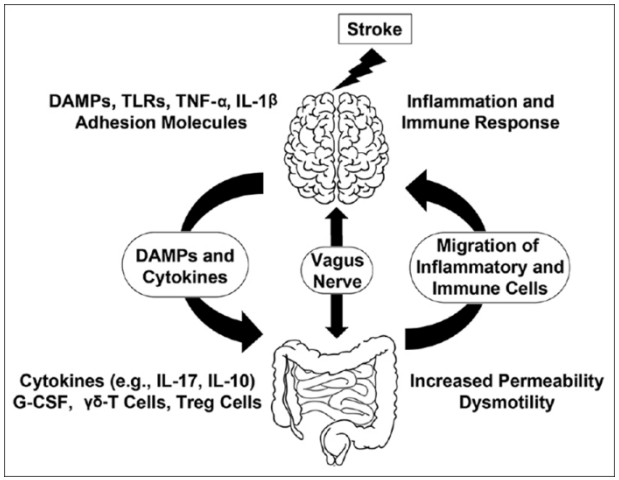
Edema cerebral perihematoma



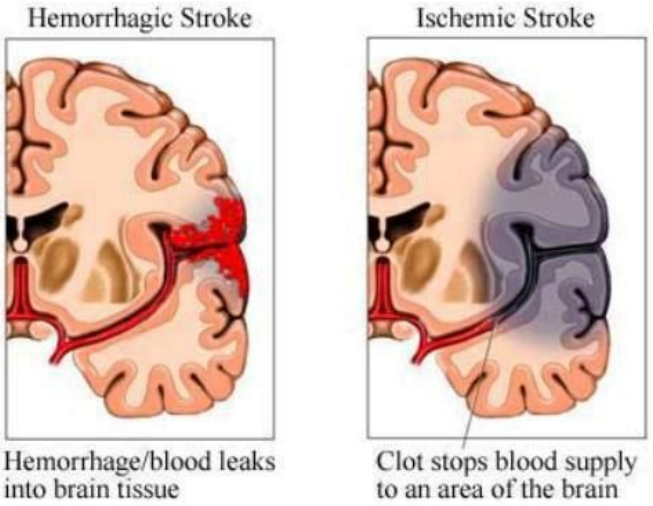
Registro HIC-CAT



MICROBIOTA I ENFERMEDAD VASCULAR CEREBRAL



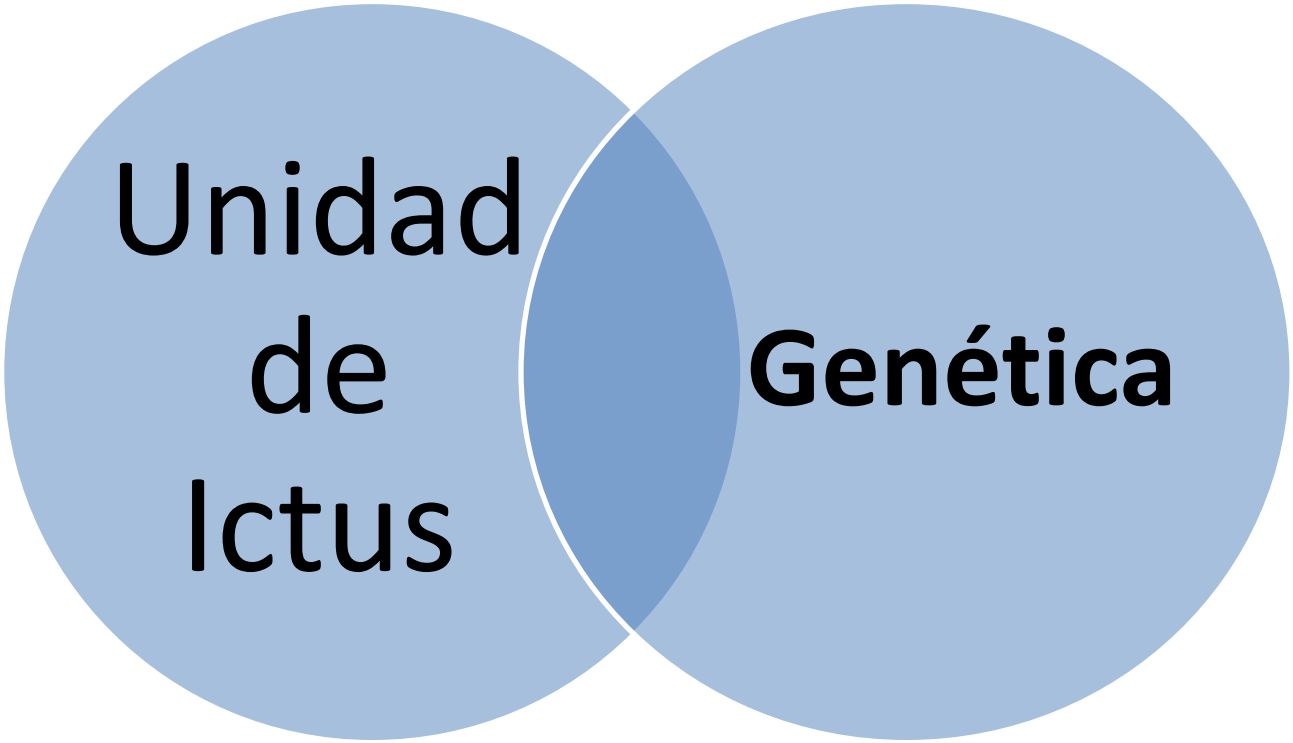
Proyecto MISTIC
Hemorragia cerebral
(PI2000925)



Colaboración:
Proyecto MAESTRO
Ictus isquémico
(PI1801338)

Objetivos:

1) Analizar la influencia del microbioma en el pronóstico funcional del ictus (MISTIC Y MAESTRO)
2) Analizar el crecimiento del hematoma según el microbioma (MISTIC)
3) Analizar el papel del microbioma en las infecciones nosocomiales (MISTIC y MAESTRO)


Unidad de Ictus
Genética