

# The Zoonotic-Parasitic & HIV Effect Modification Study [ZOPHEM] R21TW008434

H Carabin, H Foyaca-Sibat, M Anwary,  
CT Benner, IJ Targonska, L Ibañez-Valdez  
S Korsman, L Cowan, P Yogeswaran,  
RC Krecek



# Significance

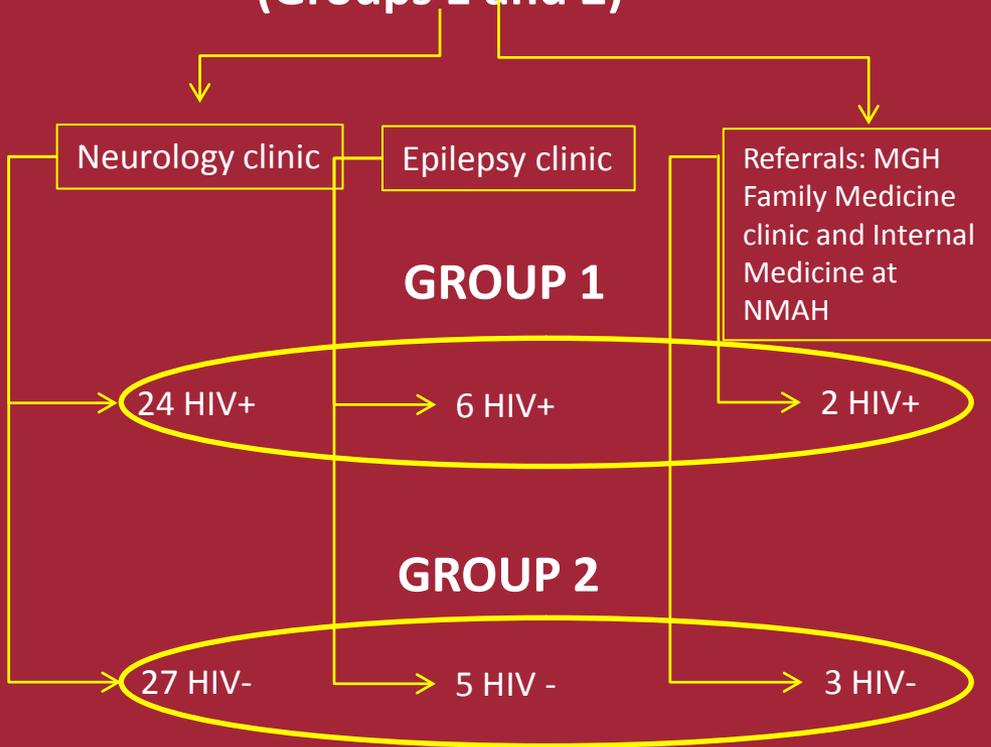
- HIV and NCC is co-endemic in several areas of the world
- It remains unknown how
  - HIV modifies the way that NCC manifests
  - HIV modifies the validity of NCC diagnosis criteria
  - Treatment for HIV impacts manifestations of NCC
- Potentially important public health and clinical impacts

# General objectives (R21)

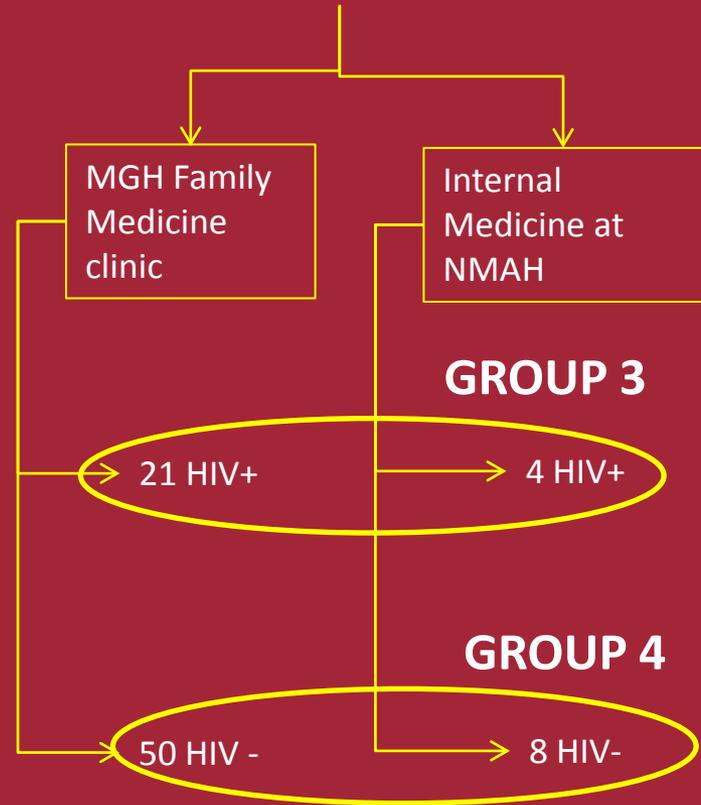
- Evaluate the interaction of two zoonotic parasitic infections (cysticercosis and toxocariasis) with HIV infection on the development of neurological manifestations
- Build capacity in epidemiological research in the ECP

# Methods / study population

Patients with neurological disorders recruited at the Nelson Mandela Academic Hospital  
(Groups 1 and 2)



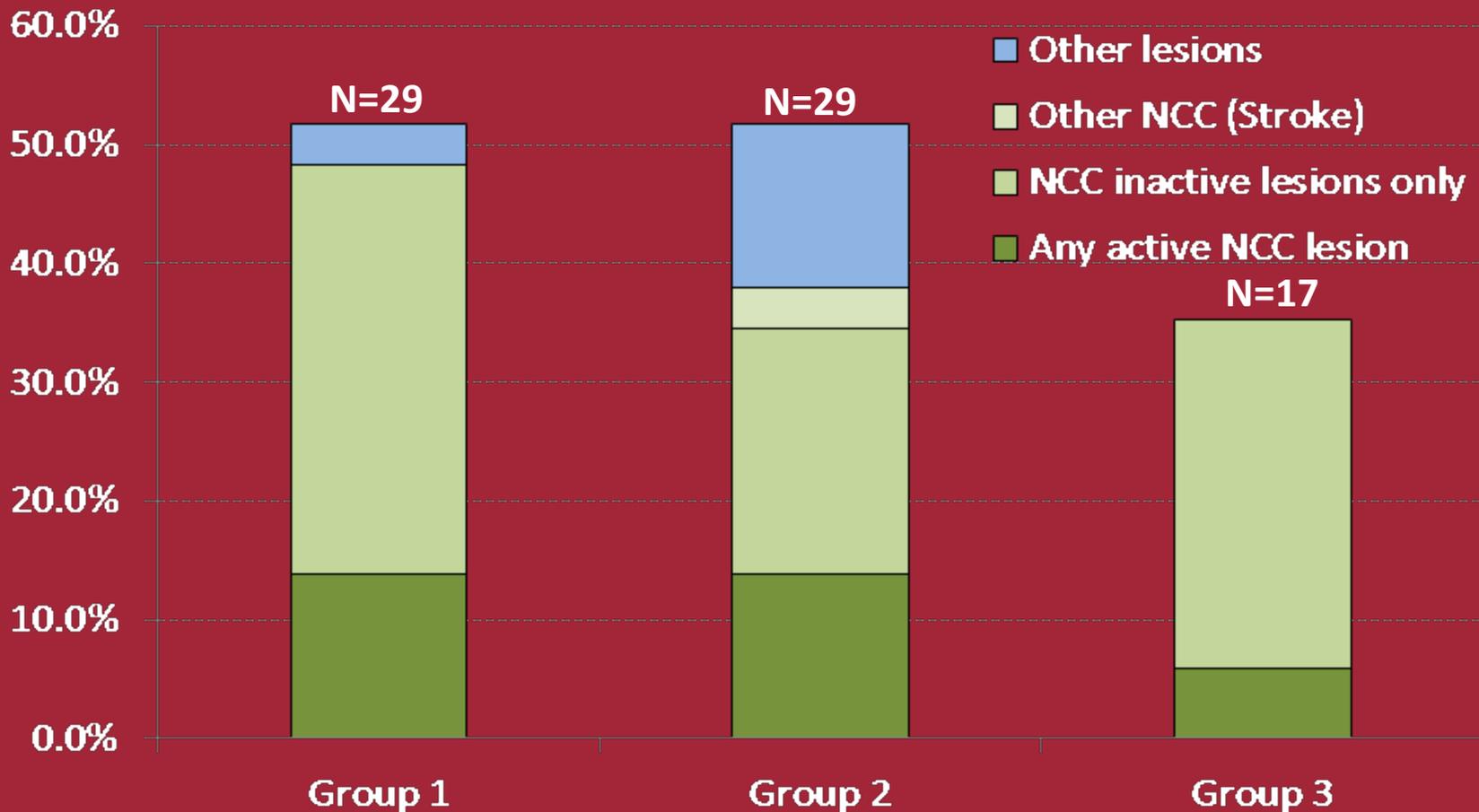
Patients without neurological disorders  
(Groups 3 and 4)



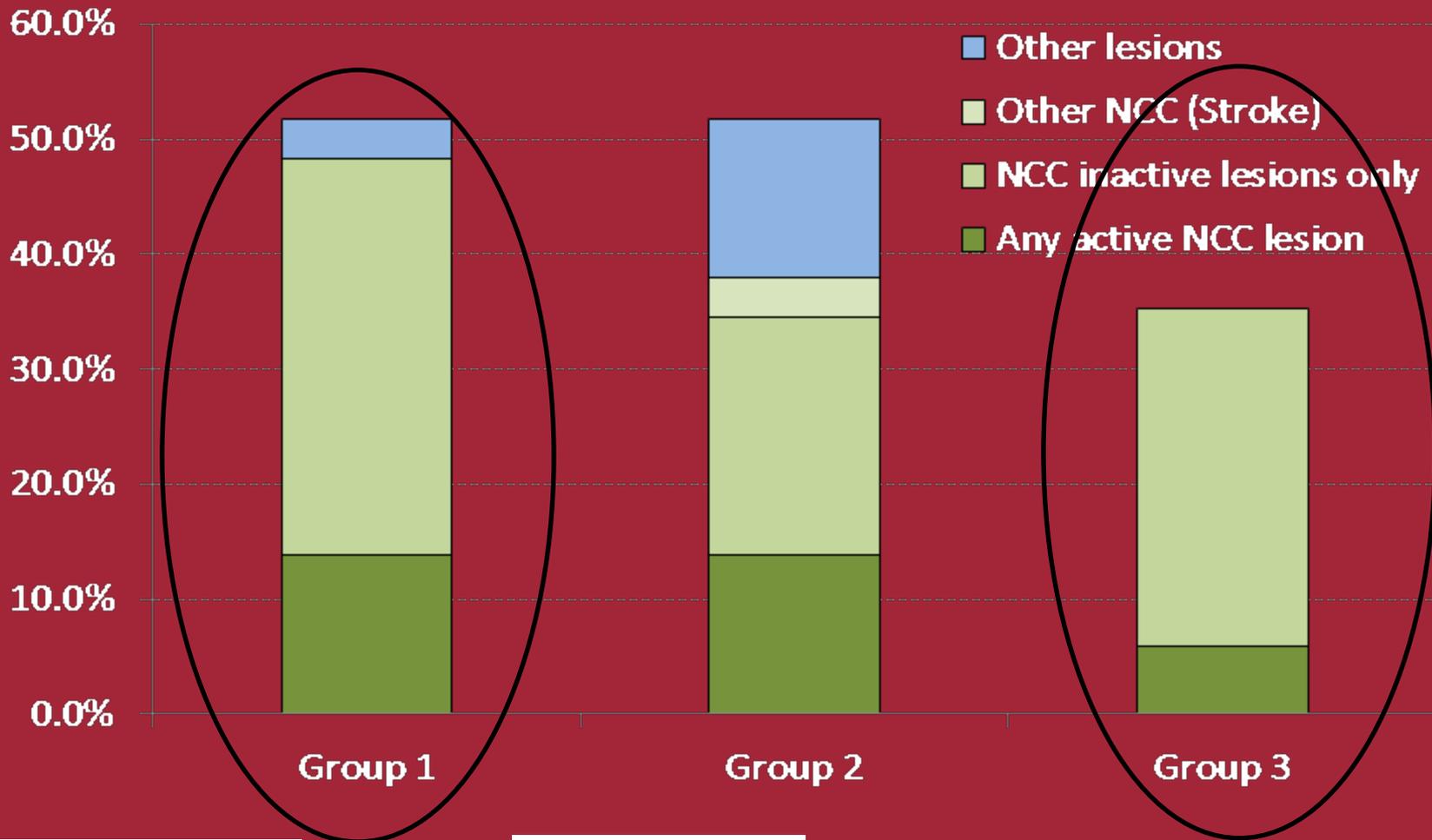
# Preliminary Results – NCC classification of Del Brutto et al, 2005.

Group	Number (%) of patients who completed a CT-scan (%)	Absolute criterion	Major criteria				Minor criteria		Definitive NCC (of those with CT)	Probable NCC (of those with CT)
			0	1	2	3	0	1		
HIV positive / neuro	29 (91%)	3	0	15	7	0	0	34	8 (28%)	14 (48%)
HIV negative / neuro	29 (83%)	2	17	11	1	0	0	32	2 (7%)	13 (45%)
HIV positive / non neuro	17(68%)	0	9	6	0	0	25	0	0 (0%)	0 (0%)
HIV negative / non neuro	0 (0%)	0	NA	6	NA	0	58	0	NA	NA
<b>Total (groups 1-3 with or without CT)</b>	<b>76 (82%)</b>								10 (11%)	27 (30%)

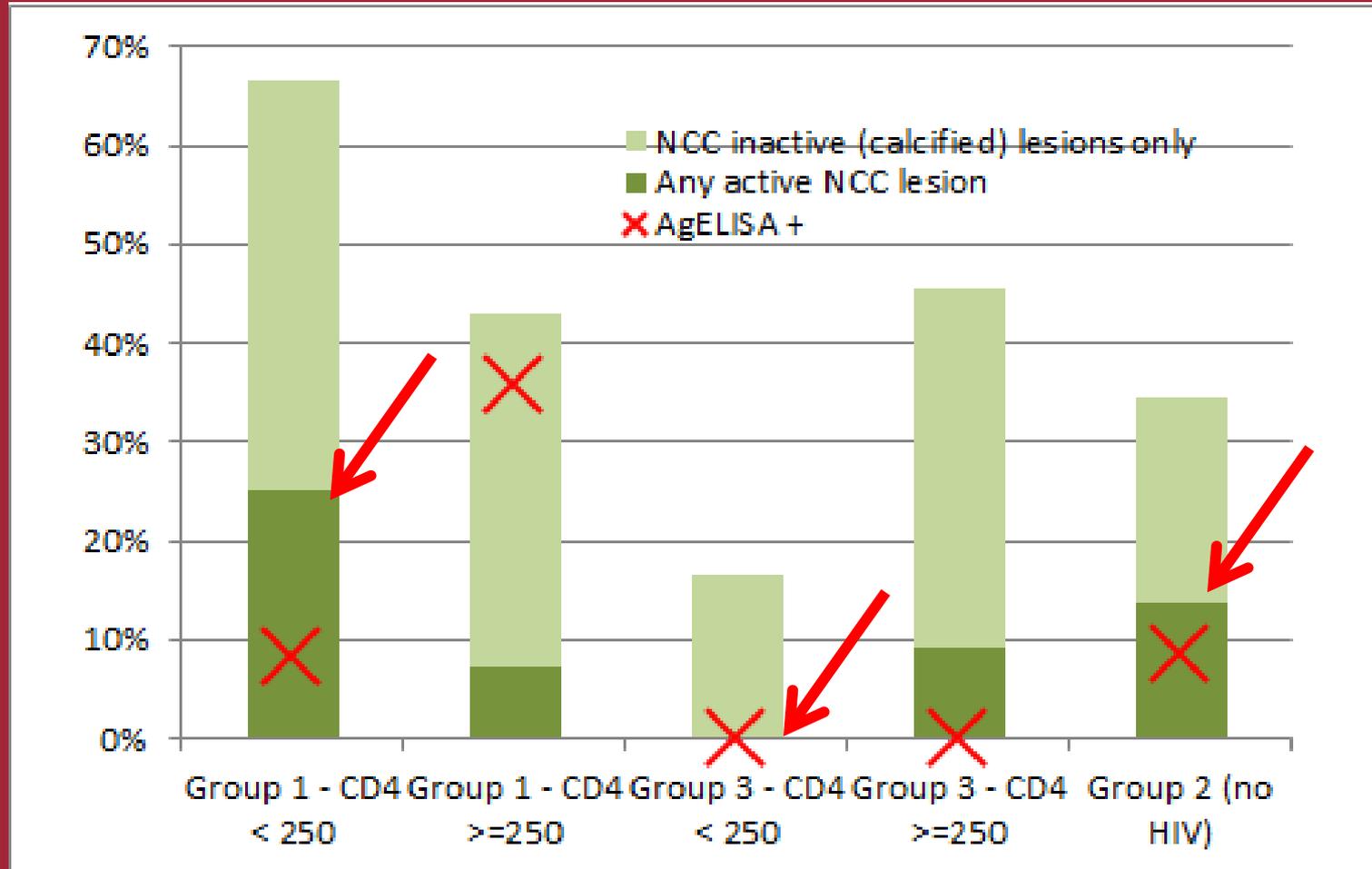
# Distribution of lesions by groups



# Distribution of lesions by groups



# Distribution of lesions by groups and CD4 counts (<250 vs ≥250)



# Barriers

- Invest time and effort
  - Laboratory technicians 
  - Radiologists 
  - Neurologists 
  - Chief of laboratory 
- Attention to details / adherence to protocol
  - Radiologists 
  - Neurologists 

# Sustainability

- Clinical and faculty turnover
- Research culture
- Administrative support