

# Mapping trials – the HIV/AIDS trials register leads the way to GIS mapping of trials registers



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# Background

- ❖ A good systematic review is dependant on up-to-date, reliable and comprehensive trials register
- ❖ Traditional methods of documenting and maintaining information are being challenged and reviewed
- ❖ A study-based register compatible with Geographic Information System (GIS) technology



# What is GIS?

- ❖ “A GIS is a system of computer software, hardware, data and personnel that make it possible to enter, manipulate, analyze, and present spatially-referenced information i.e. information tied to a location on the earth’s surface”  
- PASDA, 2004
- ❖ “...A GIS is typically used to represent maps as data layers that can be studied and used to perform analyses”  
- ESRI, 2004



# Objective

To demonstrate how the adoption of newly emerging GIS technology facilitates the visualization and retrieval of HIV/AIDS trials-related information



# Coding Sheet

## STUDY

Study Name:

Study Setting:

Status of Study

*Closed*      *Open/Ongoing*      *Planned*      *Stopped Early*

Register Status

*Pending*      *Accepted*      *Rejected*      *Not Cochrane*

Design

*RCT*      *CCT*      *Systematic Review*

## INTERVENTION

*Treatment*      *Prevention*

## METHODS

*Generation of randomisation*      *Allocation Concealment*      *Outcome assessor blinded*      *Loss to follow up*

## OUTCOMES

*Morbidity*      *Mortality/Survival*      *Transmission (MTCT)*

## PARTICIPANTS

*Male Adults/Adolescents*      *Female Adults/Adolescents*      *Male & Female*      *HIV-infected*      *Pregnant women*

## GEOGRAPHICAL COORDINATES

*Latitude*      *Longitude*

## ISRCTN

# Populating the HIV/AIDS trials register

MeerKat 1.4 Beta - [Add/Edit study]

File Study

References to studies Search Reports Reviewers and reviews Import/export Tools Window Help

Study short name: DeJesus 2003

Study Interventions Health care conditions Methods Outcomes Participants Reviews References User defined

User defined 1  
-77.0105

User defined 2  
38.9885

User defined 3

User defined 4

User defined 5

Record: 1 of 1

# Register is integrated into GIS

The screenshot displays two instances of the ArcCatalog application. The foreground window shows a file browser for the folder '050922', with 'New SR-HIV.mdb' highlighted. The background window shows a metadata table for a database register.

Location: C:\Documents and Settings\joliver\My Documents\GIS\SR-HIV GIS\050922\New SR-...

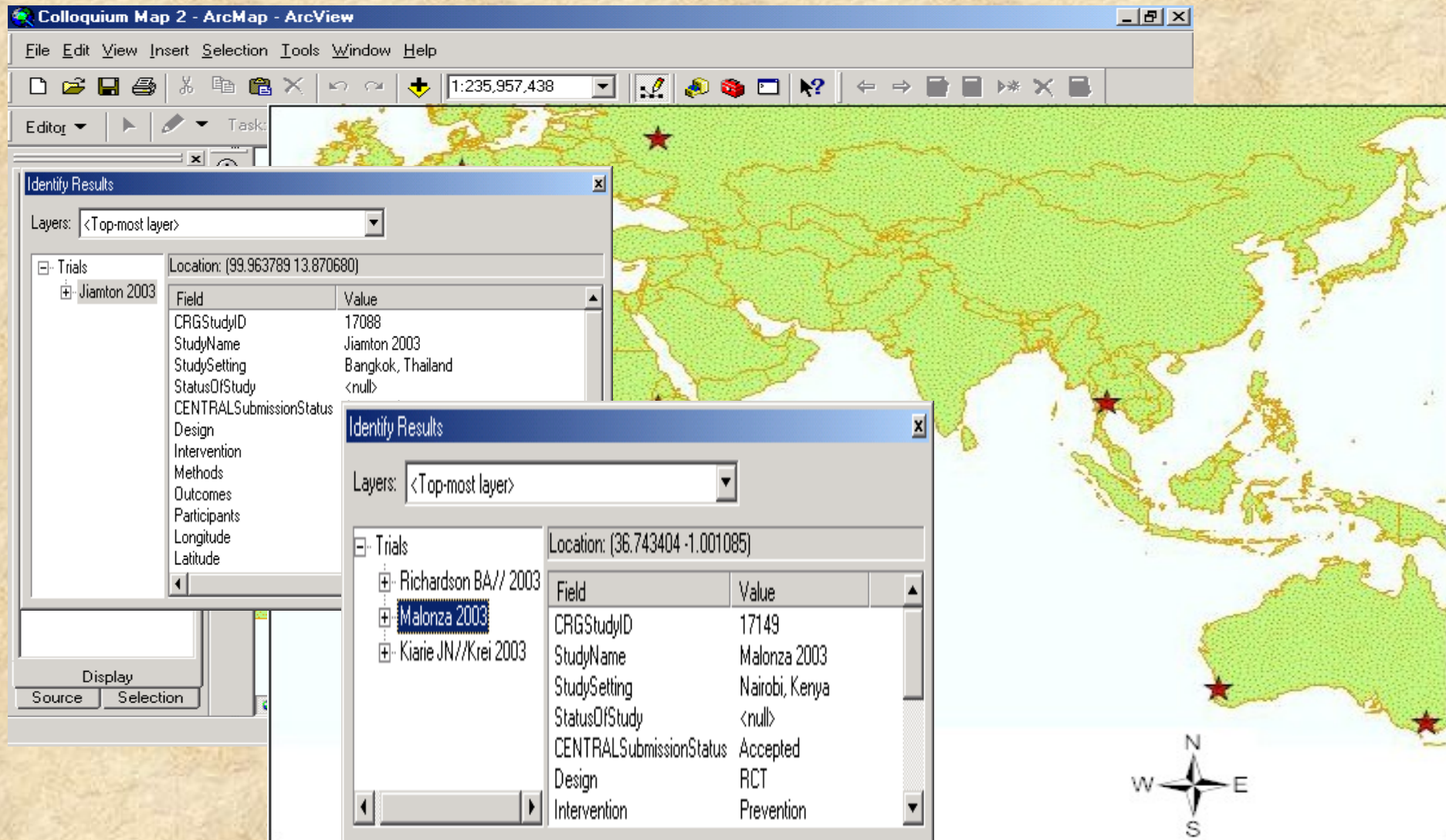
Stylesheet: FGDC ESRI

Journal	Year	Volume	Issue	Page
Gastroenterology	2004	126	5	1302-11
Journal of Adolescent Health	2004	34	5	441-52
Clinical Infectious Diseases	2004	38	Suppl 5	S376-87
Journal of Viral Hepatitis	2004	11	1	69-73
Alimentary Pharmacology and Thera	2004	19	3	339-47
Journal of Acquired Immune Deficien	2004	35	2	205-6
HIV Medicine	2004	5	2	128-9
Journal of Substance Abuse Treatm	2004	26	2	67-78
Atherosclerosis	2004	172	2	273-9
Journal of Infectious Diseases	2004	189	8	1466-71

Record: 1 Show: All Selected Records (of 1079)

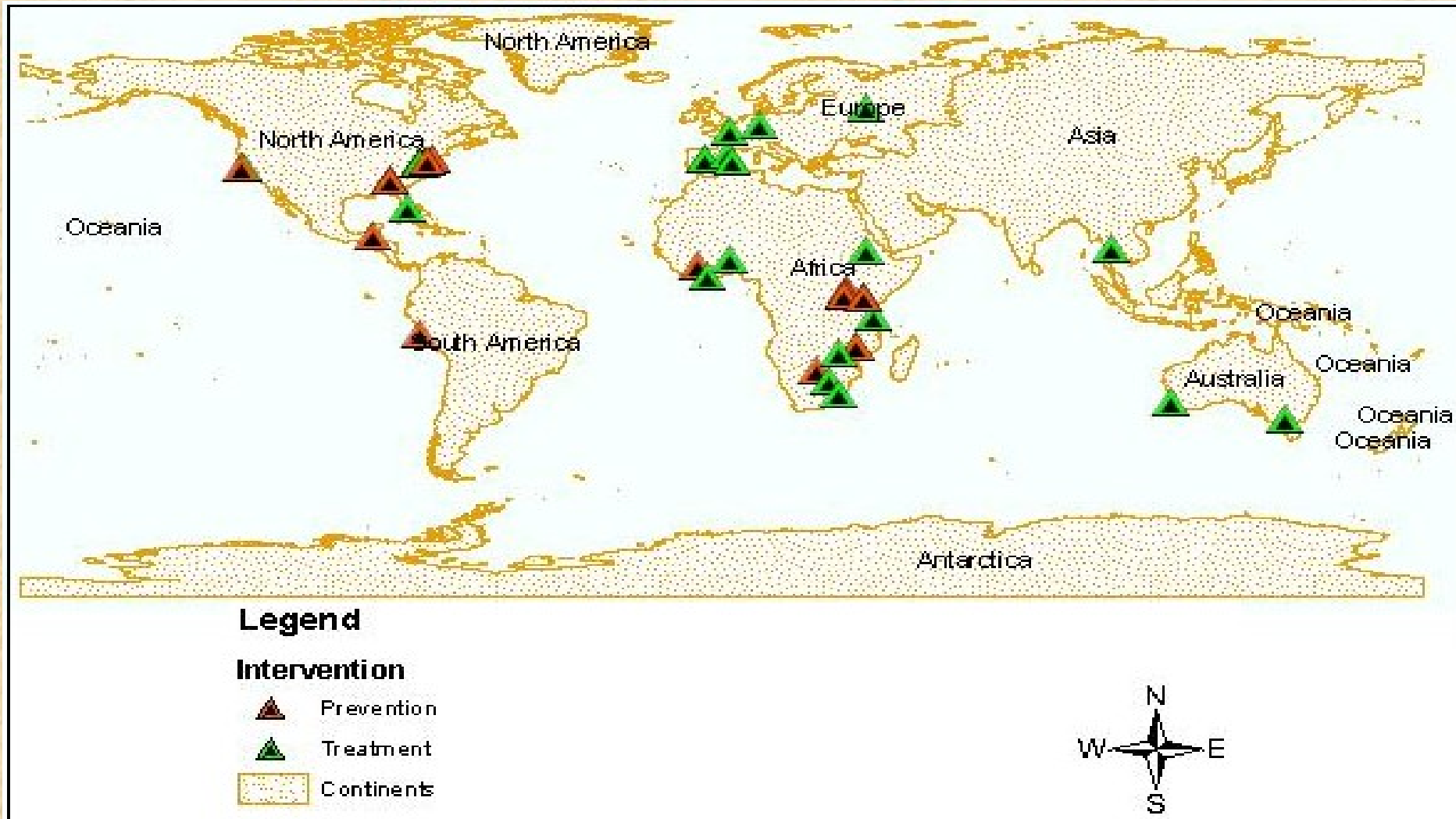
Preview: Table

# Spatial distribution of 53 trials

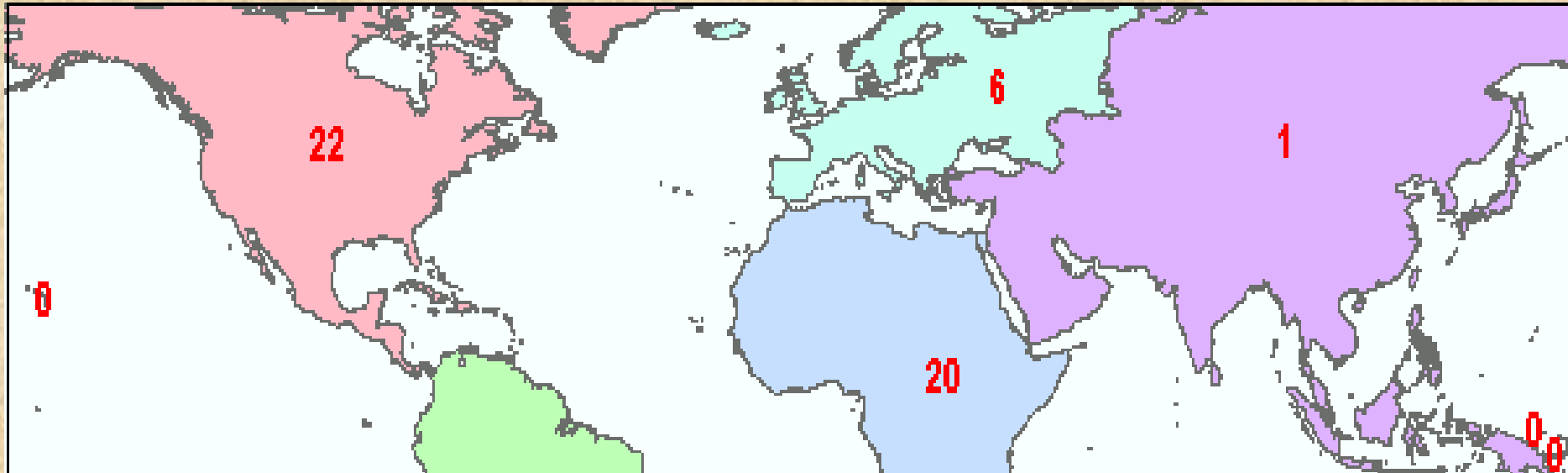




# Coverage of treatment & prevention trials

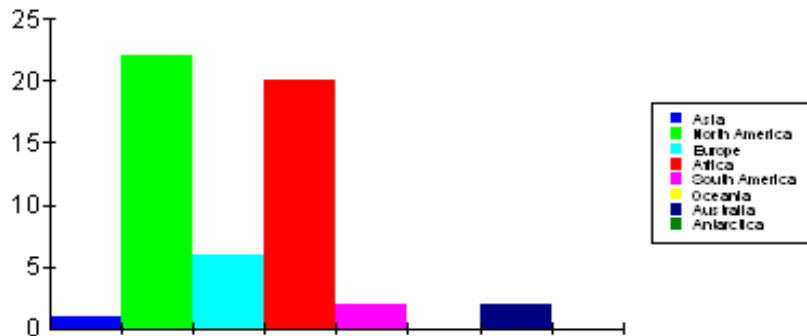


# Research & Analysis



Graph showing number of trials per continent

Graph showing number of trials per continent



10/7/2005

CONTINENT	NoOfTrial
Asia	1
North America	22
Europe	6
Africa	20
South America	2
Oceania	0
Australia	2
Antarctica	0

# Conclusions & Recommendations

- ❖ Maps are a useful tool in communicating information
- ❖ Maps provide a unique perspective and insight into reams of tabular reports
- ❖ Trials-related data can be displayed spatially in an appealing visual format
- ❖ GIS can provide a useful tool for authors, researchers, funders and policymakers to monitor existing and future trials
- ❖ GIS technology can be easily adapted to trials registers and should increasingly be considered as an essential add-on tool for all trials registers



# Acknowledgements

- ❖ The South African Cochrane Centre
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**Thank you for listening**

