



Flussi migratori: rischio infettivo e disagio sociale

Zeno Bisoffi



UNIVERSITÀ
di **VERONA**

Dipartimento
di **DIAGNOSTICA
E SANITÀ PUBBLICA**

Centro Malattie Tropicali
 NEGRAR - VERONA - ITALY
Centre for Tropical Diseases

FONDAZIONE DON GIOVANNI CALABRIA
PER LE MALATTIE TROPICALI



 **Ospedale**
Sacro Cuore Don Calabria



Dimensioni del fenomeno migratorio (2015)

- **244 mln** di migranti
(**3.3%** della
popolazione
mondiale)
- **48%** sono donne
- **21,3 mln** di rifugiati
- **3,2 mln** di richiedenti
asilo
- **Circa 50 mln** di
immigrati irregolari



A chi si riferisce

.....Generalmente sono ... di pelle scura. Molti puzzano perché tengono lo stesso vestito per settimane.

Si costruiscono baracche nelle periferie. Quando riescono ad avvicinarsi al centro affittano a caro prezzo appartamenti fatiscenti. Si presentano in 2 e cercano una stanza con uso cucina. Dopo pochi giorni diventano 4, 6, 10. Parlano lingue incomprensibili, forse dialetti. Molti bambini vengono utilizzati per chiedere l'elemosina; spesso davanti alle chiese donne e uomini anziani invocano pietà, con toni lamentosi e petulanti.

Fanno molti figli che faticano a mantenere e sono assai uniti tra di loro. Dicono che siano dediti al furto e, se ostacolati, violenti.

Le nostre donne li evitano sia perché poco attraenti e selvatici, sia perché è voce diffusa di stupri consumati quando le donne tornano dal lavoro.

I governanti hanno aperto troppo gli ingressi alle frontiere ma, soprattutto, non hanno saputo selezionare tra coloro che entrano nel paese per lavorare e quelli che pensano di vivere di espedienti o, addirittura, di attività criminali»



'I migranti portano malattie gravi', lo pensano 2 italiani su 3

SANITÀ

Pubblicato il: 03/02/2017 12:17

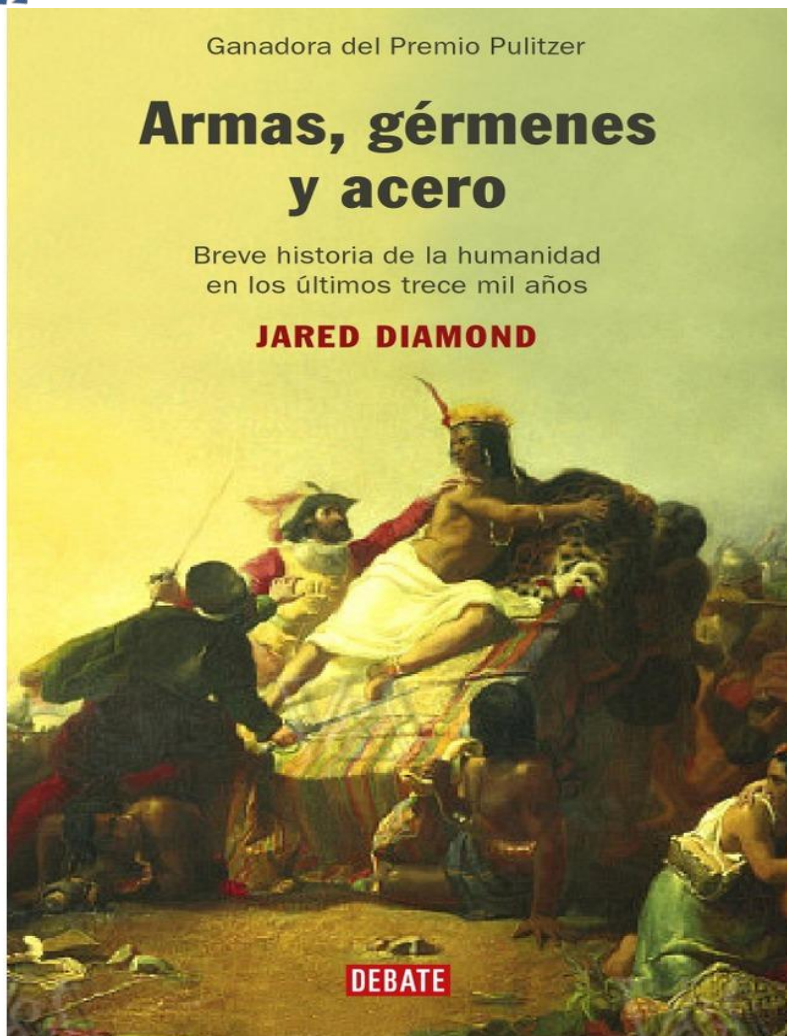
Quasi due terzi degli italiani pensano che l'immigrazione porti in Italia malattie infettive gravi. E' quanto emerge dal sondaggio Index Research, secondo cui il 63,8% degli intervistati è convinto che "l'arrivo degli immigrati nel nostro Paese favorisce la diffusione di malattie infettive anche gravi". Il 26,5% crede invece che non sia così, mentre il 9,7% non sa o non risponde.

Pubblicato il: 03/02/2017 12:17

Ma i migranti portano malattie ?? NELLA STORIA CERTAMENTE SÌ...

Del mar los vieron llegar...

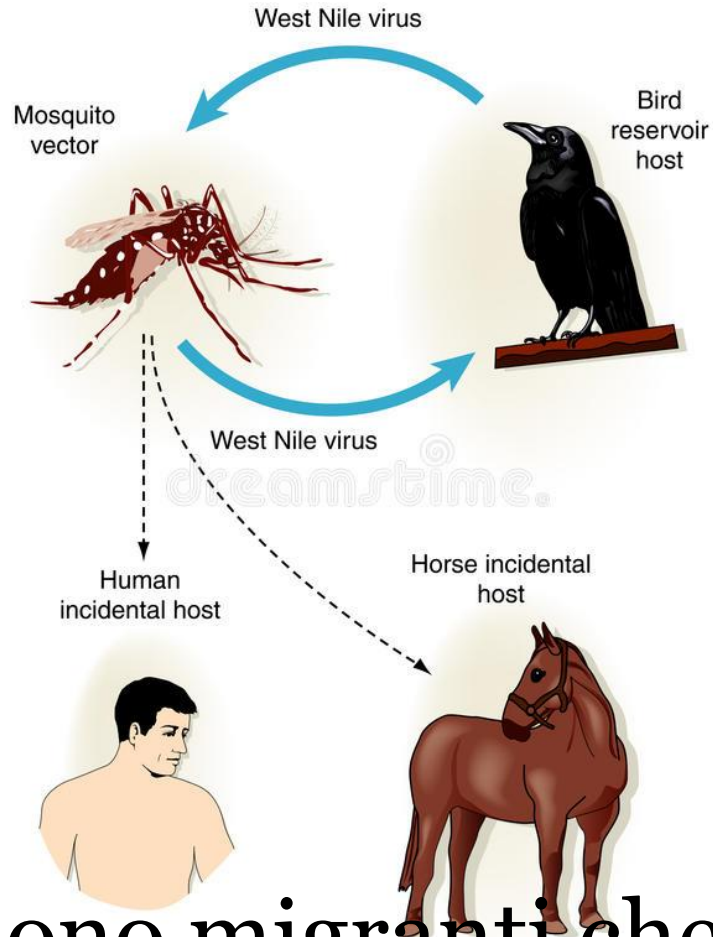




Hubo contagios en el Nuevo Mundo antes de 1492 que no estaban presentes en el Antiguo (enfermedad de Chagas, por ejemplo).... ..

Cuando se indican las infecciones traídas al Nuevo Mundo desde el Viejo, sin embargo, nos encontramos con la mayoría de los peores males de la humanidad, entre ellos la viruela, la malaria, la fiebre amarilla, el sarampión, el cólera, el tifus y la peste bubónica.

Ma i migranti portano malattie ?? NELLA STORIA CERTAMENTE SÌ...
E anche nell'attualità



Ci sono migranti che non rispettano le leggi
sull'immigrazione

Effetto migrante sano

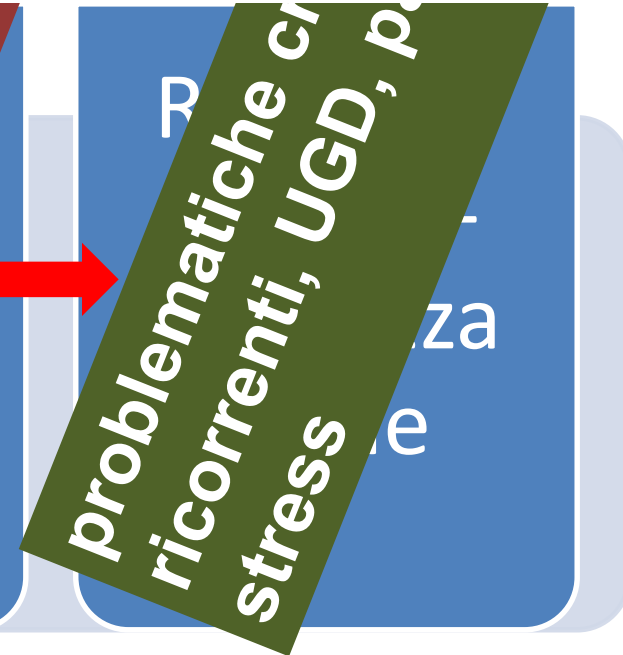
Meccanismo di **selezione alla partenza di soggetti giovani che possono affrontare il viaggio**, ovvero in condizioni di buona salute e nel pieno dell'efficienza fisica e psichica.

N.B. *Tale meccanismo non vale per chi è costretto a partire in condizioni di particolare vulnerabilità provocate da guerre, persecuzioni, carestie o disastri ambientali (rifugiati, profughi, sfollati).*

Timeline: criticità differenti nei diversi momenti del percorso migratorio



L'effetto migrante sano SFUMA → COMPARE l'effetto migrante esausto



Motivo di ricovero per gli stranieri in Italia

(SIMM, dati da MoH, 2012)

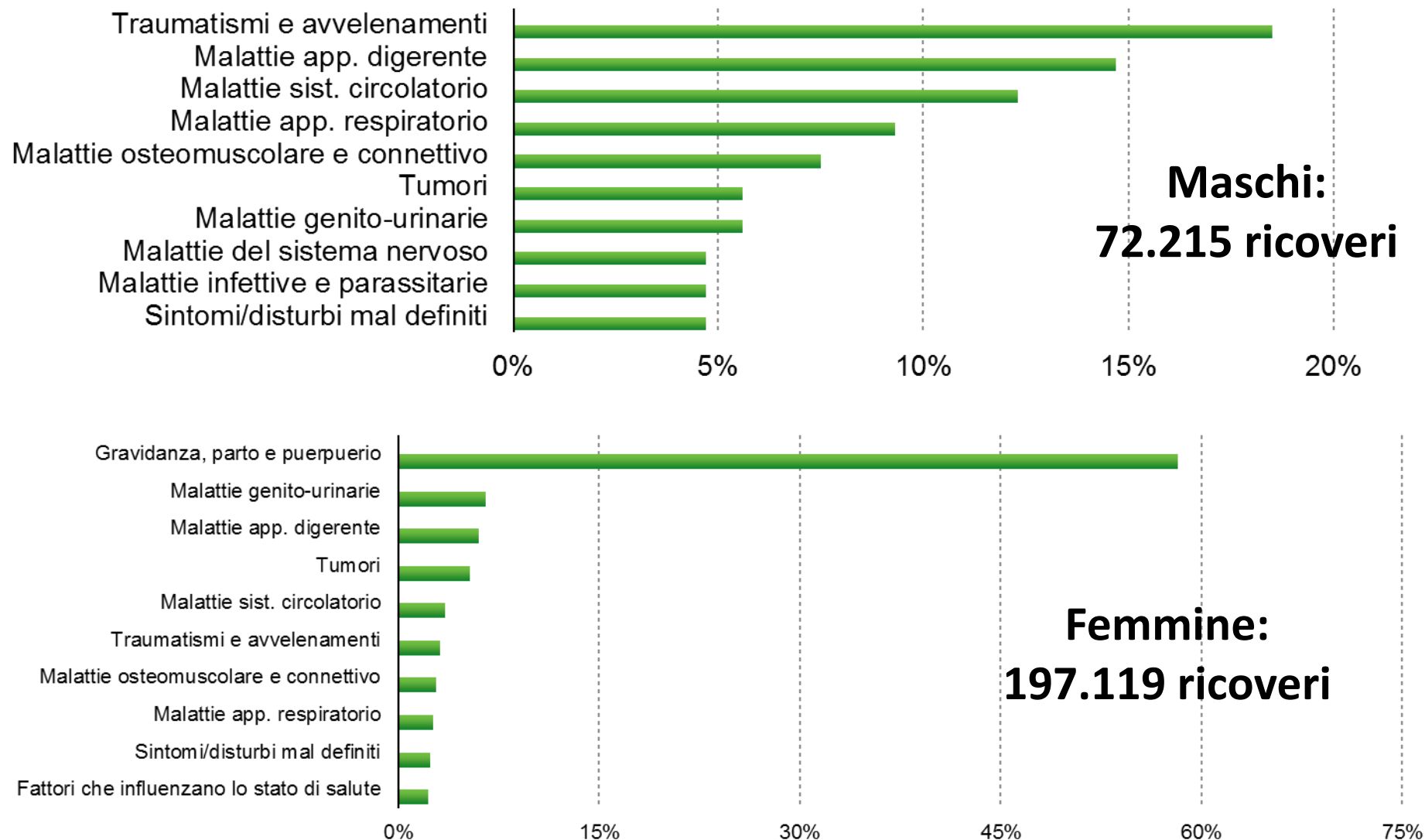


Table 1. Health status of newly arrived migrants

Diagnosis	Study reference ¹⁵		Study reference ¹⁰	
	Number	%	Number	%
Respiratory tract infection	744	23	22	6.7
Rheumatological	591	18	1	0.3
Headache/neurological	325	10	13	4.0
Epigastric pain	297	9		
Dermatological conditions	261	8	7	2.1
<u>Allergic reactions or skin erythema</u>	248	8		
Psychiatric conditions	177	5	7	2.1
Injuries	175	5	66	20.3
Dental problems	99	3		
Cardiac disease	92	3	10	3.1
Gastroenteritis	51	2	34	10.4
Gynaecological/obstetric	43	10	48	14.7
Fever	35	1		
Diabetes mellitus/metabolic	27	1	9	2.8
Genitourinary disease	13	0	4	1.2
Frostbite	5	0		21.9
Unknown			34	10.4
Total	3280	100	326	100

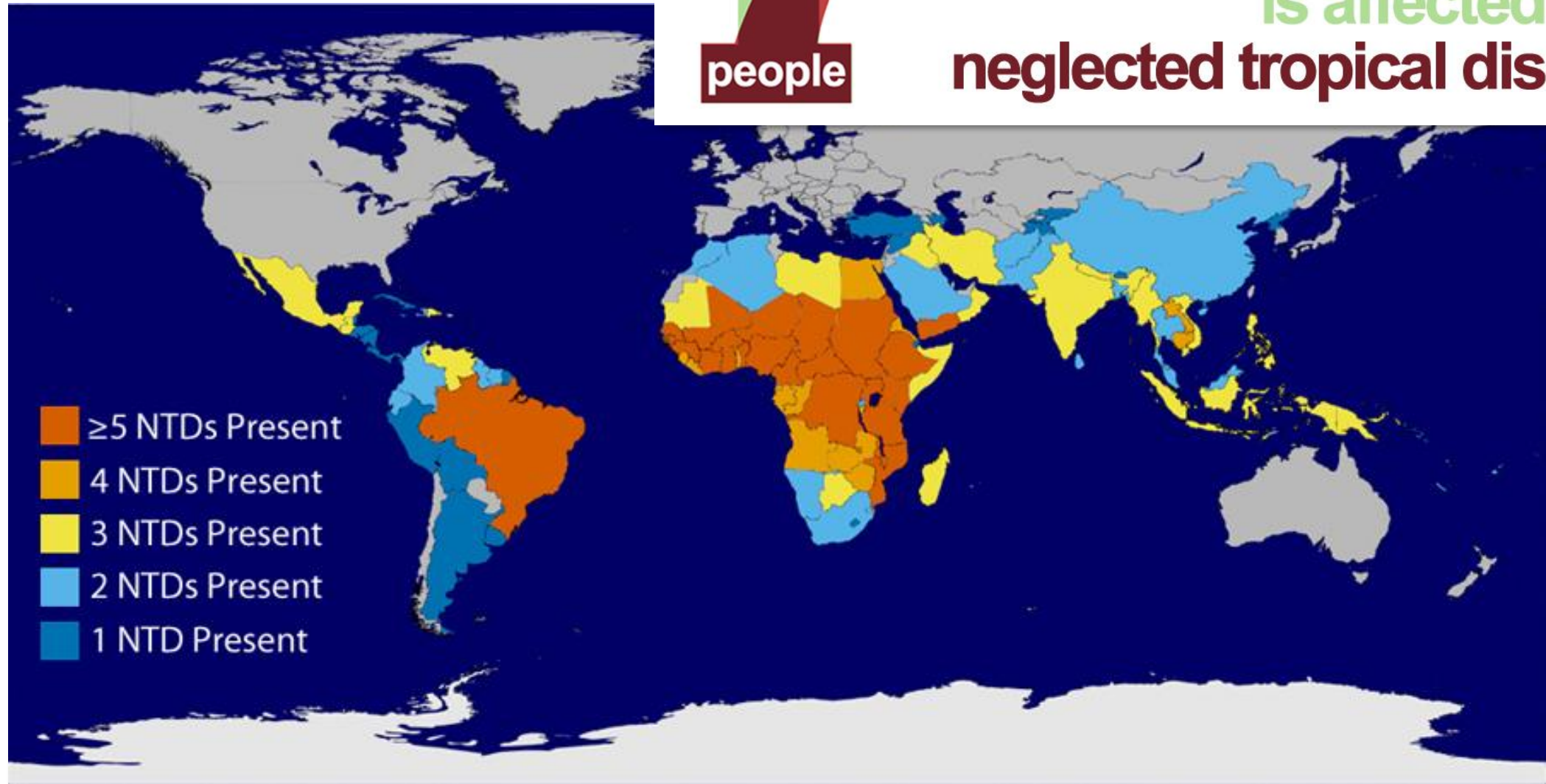
I migranti “portano” malattie?



**World Health
Organization**



one in seven people
worldwide
is affected by a
neglected tropical disease



NTDs: several list exist

Table 1. The Major Neglected Tropical Diseases Ranked by Prevalence.*

Disease	Global Prevalence (millions)	Population at Risk
Ascariasis	807	4.2 billion
Trichuriasis	604	3.2 billion
Hookworm infection	576	3.2 billion
Schistosomiasis	207	779 million
Lymphatic filariasis	120	1.3 billion
Trachoma	84	590 million
Onchocerciasis	37	90 million
Leishmaniasis	12	350 million
Chagas' disease	8–9	25 million
Leprosy	0.4	ND
Human African trypanosomiasis	0.3	60 million
Dracunculiasis	0.01	ND
Buruli ulcer	ND	ND

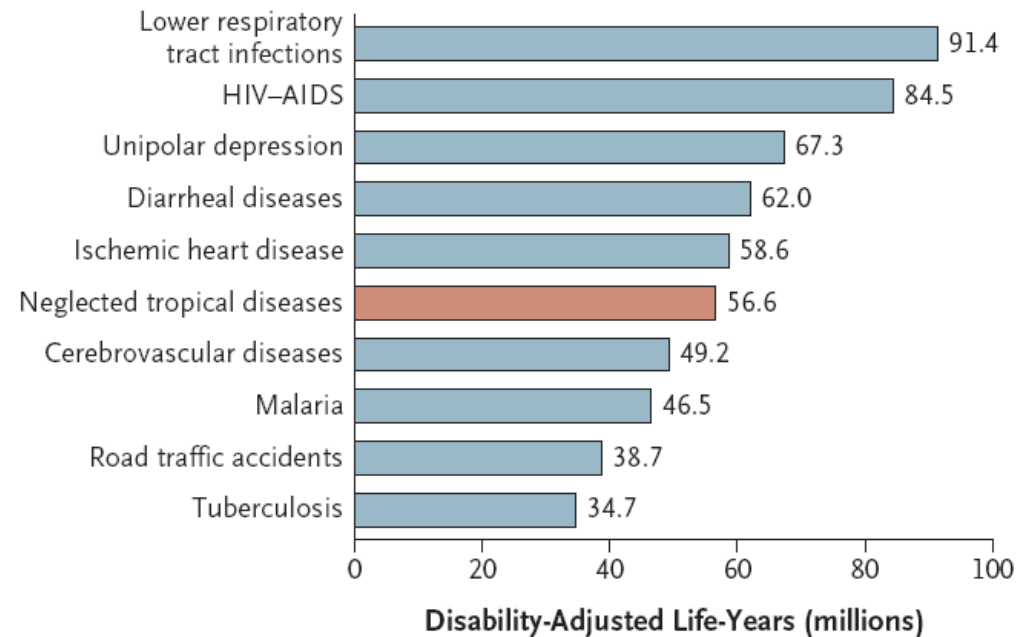


Figure 1. The 10 Leading Causes of Life-Years Lost to Disability and Premature Death.

WHAT WE CALL “**NEGLECTED DISEASES**” ARE IN FACT

“**DISEASES OF NEGLECTED PEOPLE**”.

AMONG THE NEGLECTED PEOPLE WE FIND THE MIGRANTS

AMONG THE NEGLECTED MEDICAL DISCIPLINES WE HAVE:

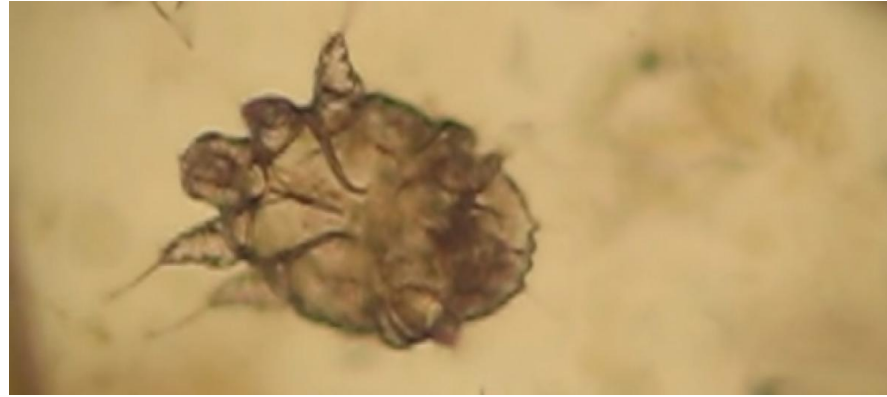
“**IMMIGRANT MEDICINE**”.

Non tutti i viaggi sono di piacere



NEGLECTED PEOPLE

ALLARME SCABBIA



The NEW ENGLAND JOURNAL *of* MEDICINE

ESTABLISHED IN 1812

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Mass Drug Administration for Scabies Control in a Population with Endemic Disease

Lucia Romani, M.Soc.Dev., Margot J. Whitfeld, M.B., B.S., Josefa Koroivueta, M.B., B.S., Mike Kama, M.B., B.S., Handan Wand, Ph.D., Lisi Tikoduadua, M.B., B.S., Meciusela Tuicakau, M.B., B.S., Aminiasi Koroï, B.A., Ross Andrews, Ph.D., John M. Kaldor, Ph.D., and Andrew C. Steer, Ph.D.

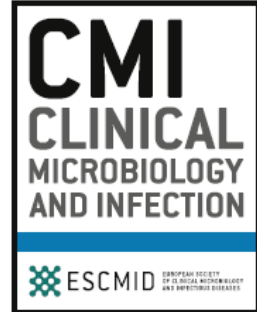


ELSEVIER

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Original article

Seroprevalence of five neglected parasitic diseases among immigrants accessing five infectious and tropical diseases units in Italy: a cross-sectional study

G. Martelli ^{1,*}, C. Di Girolamo ^{2,3}, L. Zammarchi ^{4,5}, A. Angheben ⁶, M. Morandi ⁷, S. Tais ⁸, M. Degani ⁸, I. El Hamad ⁹, S. Caligaris ¹⁰, A. Ciannaméo ², E. Grilli ¹¹, L. Urbinati ¹⁰, G.B. Monteiro ⁶, C. Scarcella ⁹, N. Petrosillo ¹¹, M. Digaetano ^{1,12}, L. Rabbi ¹, N. Bazzanini ^{1,13}, F. Cacciatore ², B.L. Marta ², M.L. Moro ⁷, A. Bartoloni ^{4,5}, P. Viale ¹, G. Verucchi ¹

Prevalenze effettive

11,2 % prevalenza di positività ad almeno una malattia

- 56/1011 strongiloidiasi → **5,5%**
- 33/571 schistosomiasi → **5,8%**
- 12/111 toxocariasi → **10,8%**
- 7/56 filariasi → **12,5%**
- 8/226 malattia di Chagas → **3,5%**
- 2/32 leishmaniasi → **6,3%**

Dati di screening, CMT

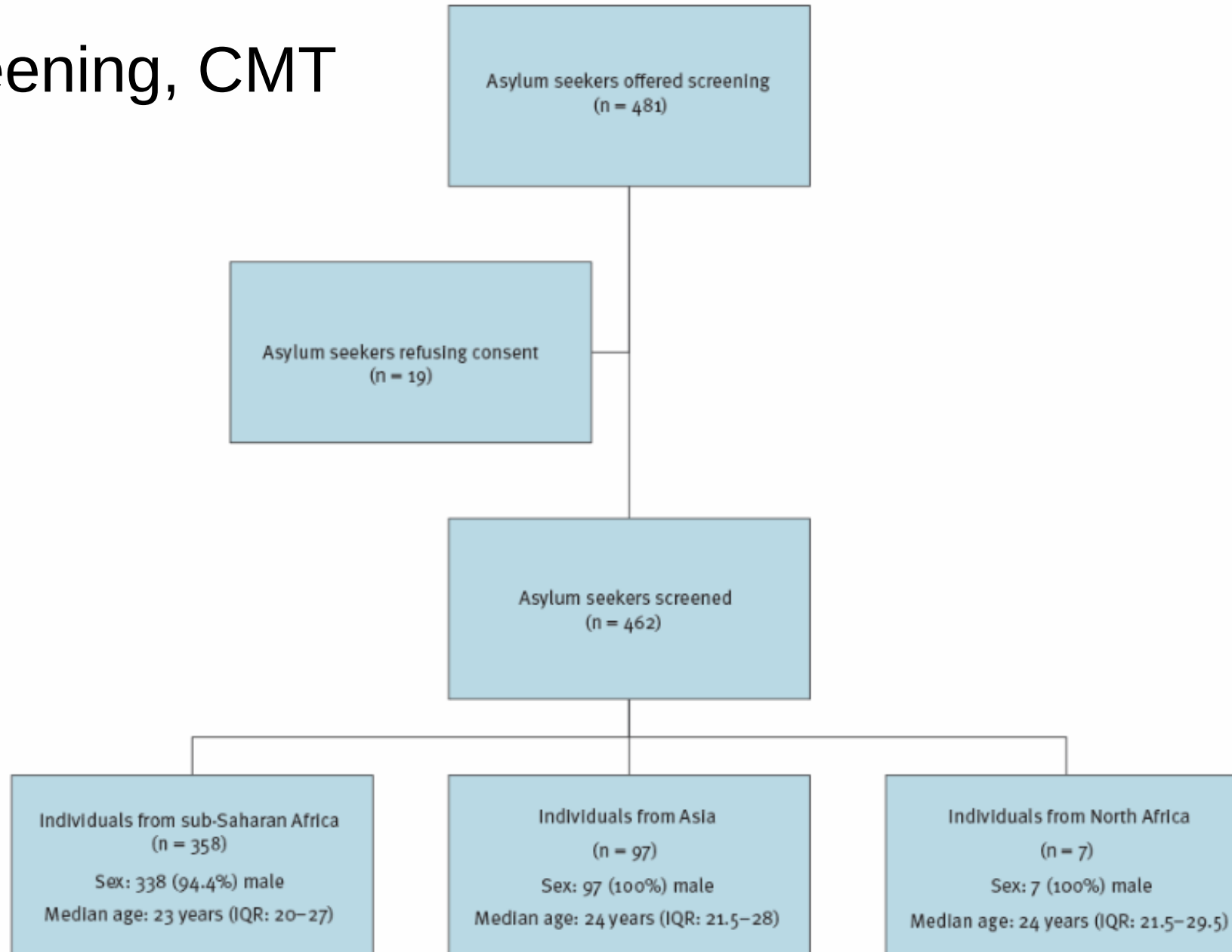


TABLE 4

Crude and adjusted odds ratios for the association between helminthic infections^a and eosinophilia among all migrants and stratified by region of origin, Verona province, Italy, April 2014–June 2015

Covariate	Eosinophilia present		Eosinophilia absent		Crude OR (95% CI)	Adjusted OR (95% CI) ^b
	n/N	%	n/N	%		
Total (n = 461) ^{c,d}						
Age (median, IQR)	23	(20–26)	24	(20–28)	0.96 (0.93–0.99)	0.98 (0.94–1.02)
<i>Strongyloides stercoralis</i>	42/144	29.2	51/316	16.1	2.14 (1.33–3.41)	1.98 (1.11–3.52)
<i>Schistosoma</i> spp.	46/144	31.9	36/308	11.7	3.55 (2.17–5.84)	5.13 (2.93–9.18)
Hookworm ^e	32/126	25.4	15/227	6.7	4.81 (2.53–9.53)	5.28 (2.63–11.00)
Sub-Saharan Africa (n = 357) ^d						
Age	22	(20–26)	24	(20–28)	0.96 (0.92–1.01)	0.97 (0.91–1.01)
<i>S. stercoralis</i>	30/105	28.6	34/251	13.6	2.55 (1.45–4.45)	2.80 (1.37–5.79)
<i>Schistosoma</i> spp.	46/105	43.8	36/252	14.3	4.68 (2.78–7.93)	6.38 (3.46–12.05)
Hookworm ^e	22/94	23.4	12/176	6.8	4.17 (1.99–9.14)	4.69 (2.02–11.22)
Asia (n = 97) ^f						
Age	23	(19–27)	25	(21–29)	0.96 (0.89–1.02)	1.00 (0.93–1.06)
<i>S. stercoralis</i>	12/38	31.6	17/59	28.8	1.14 (0.46–2.75)	0.76 (0.25–2.13)
Hookworm ^e	10/31	32.3	3/48	6.3	7.14 (1.95–34.38)	7.54 (1.95–38.10)

Buonfrate Dora, Gobbi Federico, Marchese Valentina, Postiglione Chiara, Badona Monteiro Geraldo, Giorli Giovanni, Napoletano Giuseppina, Bisoffi Zeno. Extended screening for infectious diseases among newly arrived asylum seekers from Africa and Asia, Verona province, Italy, April 2014 to June 2015. Euro Surveill. 2018;23(16):pii=17-00527. <https://doi.org/10.2807/1560-7917.ES.2018.23.16.17-00527>

Schistosomiasi



S. mansoni

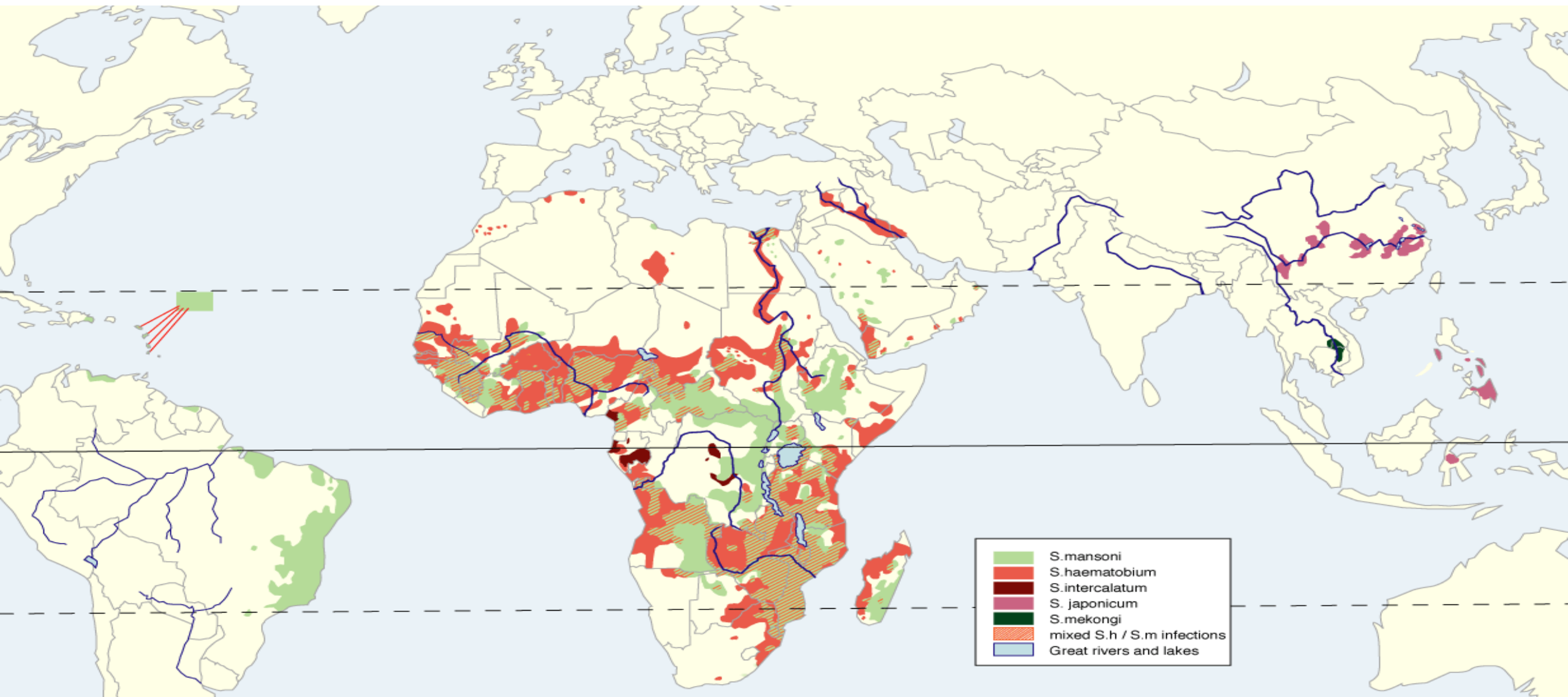


S. haematobium

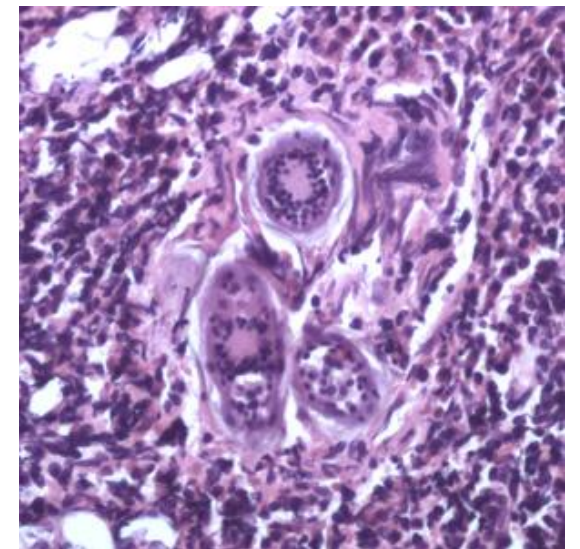
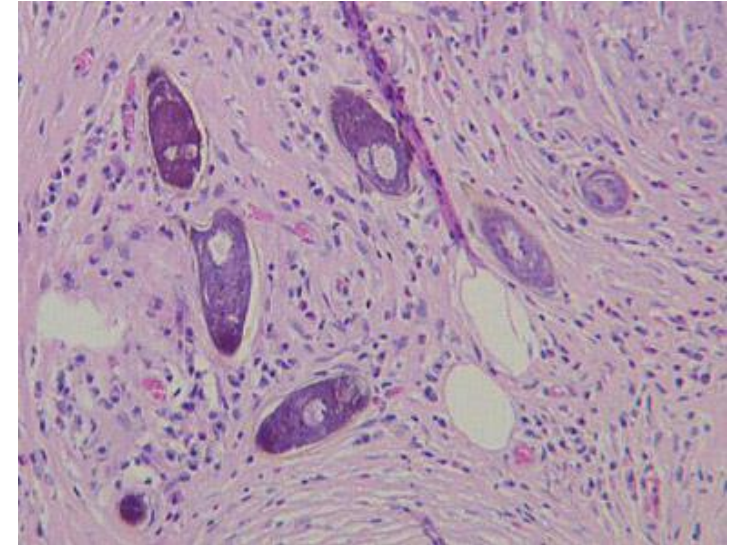
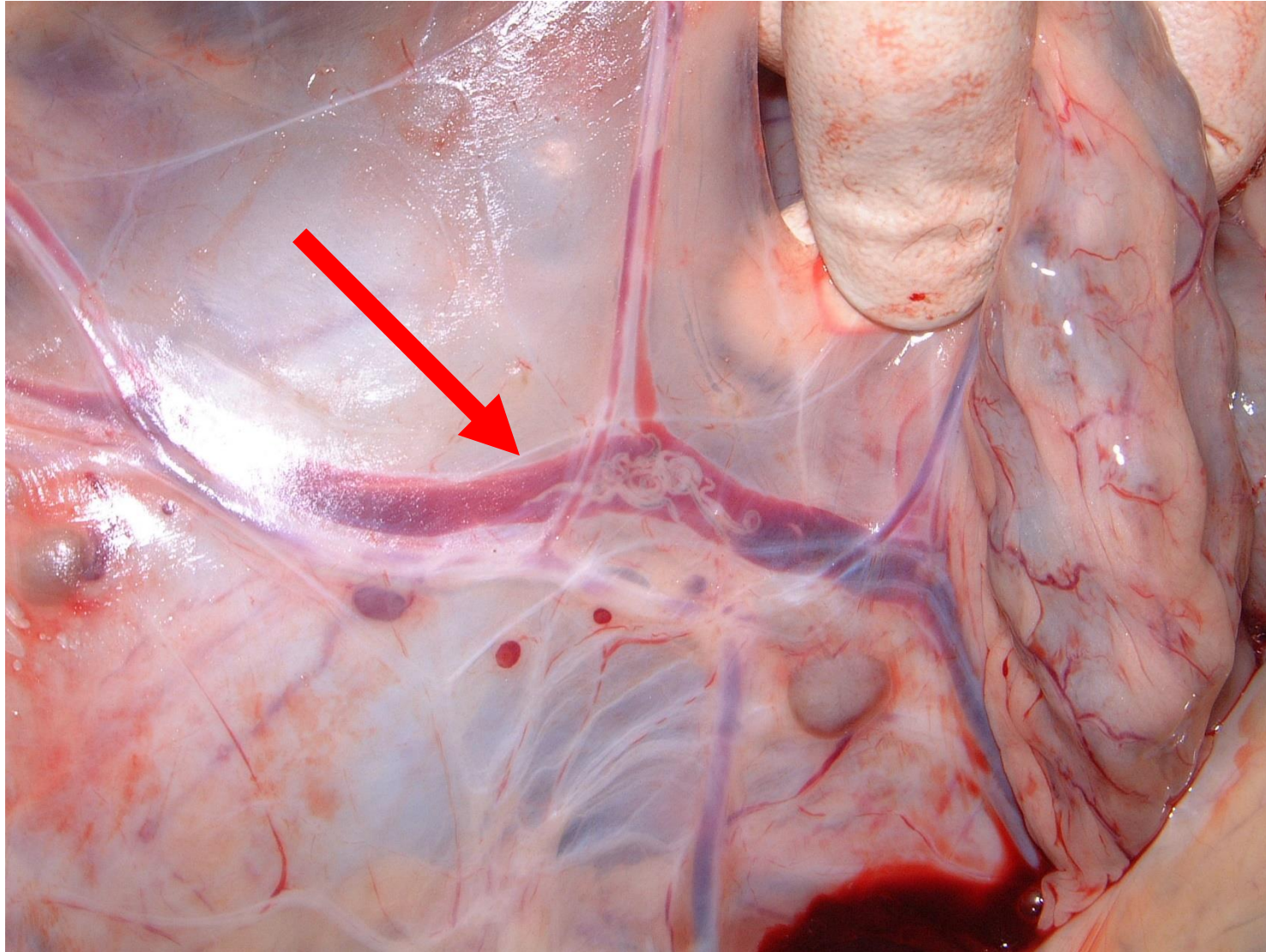


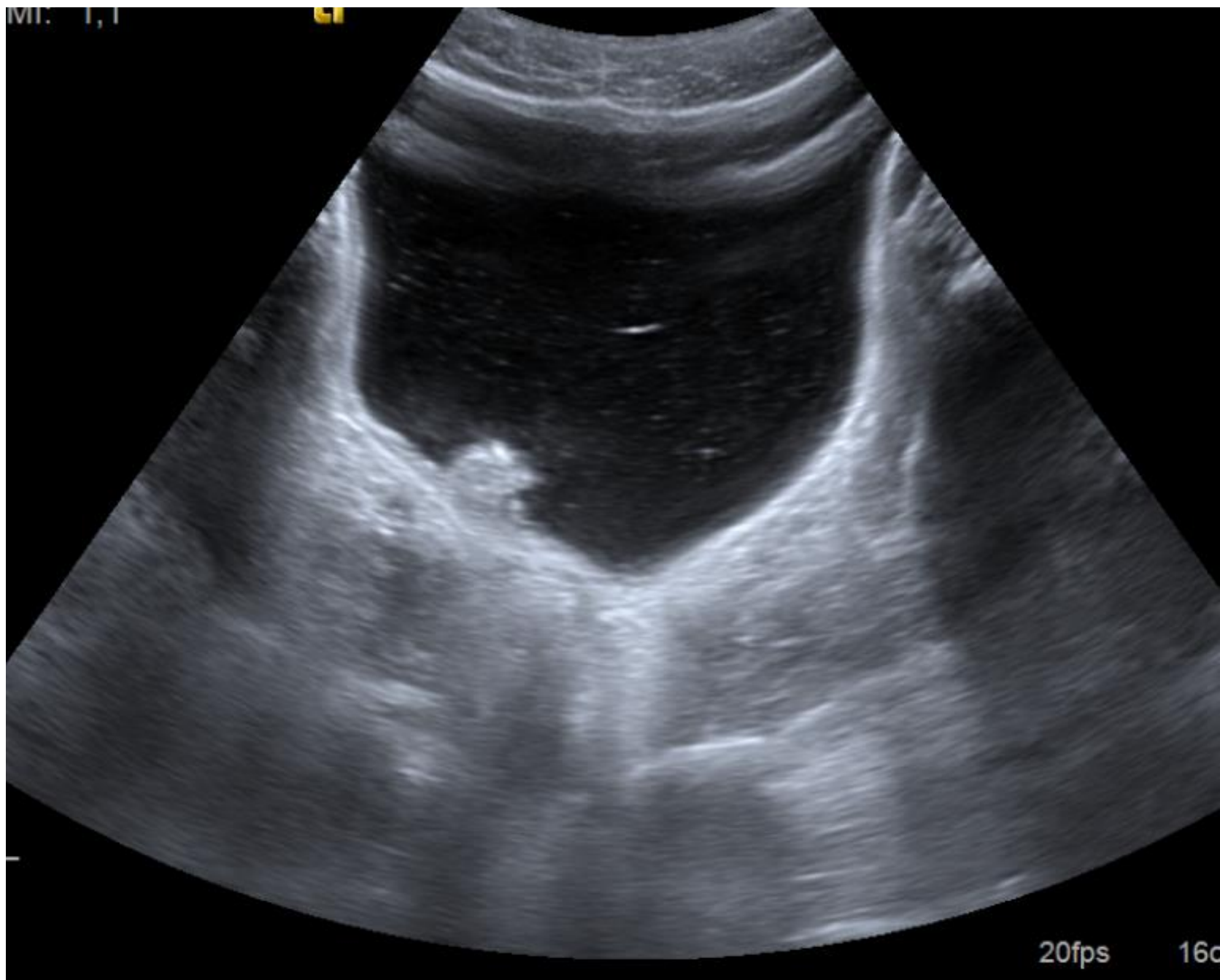
Cortesia Dr. Lorenzo Zammarchi, Università di Firenze

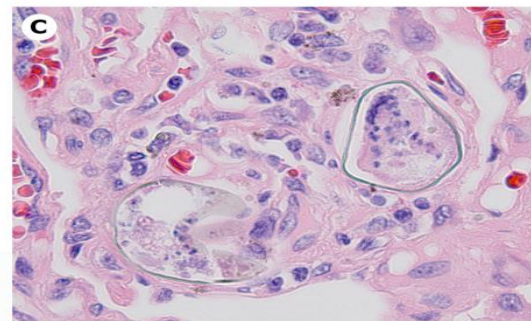
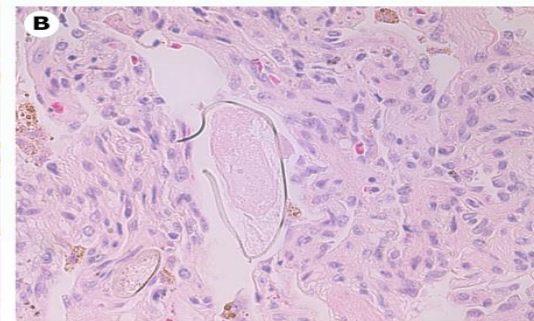
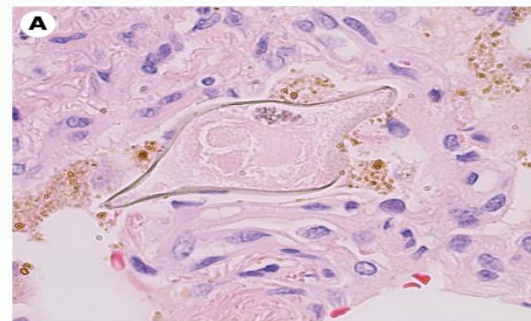
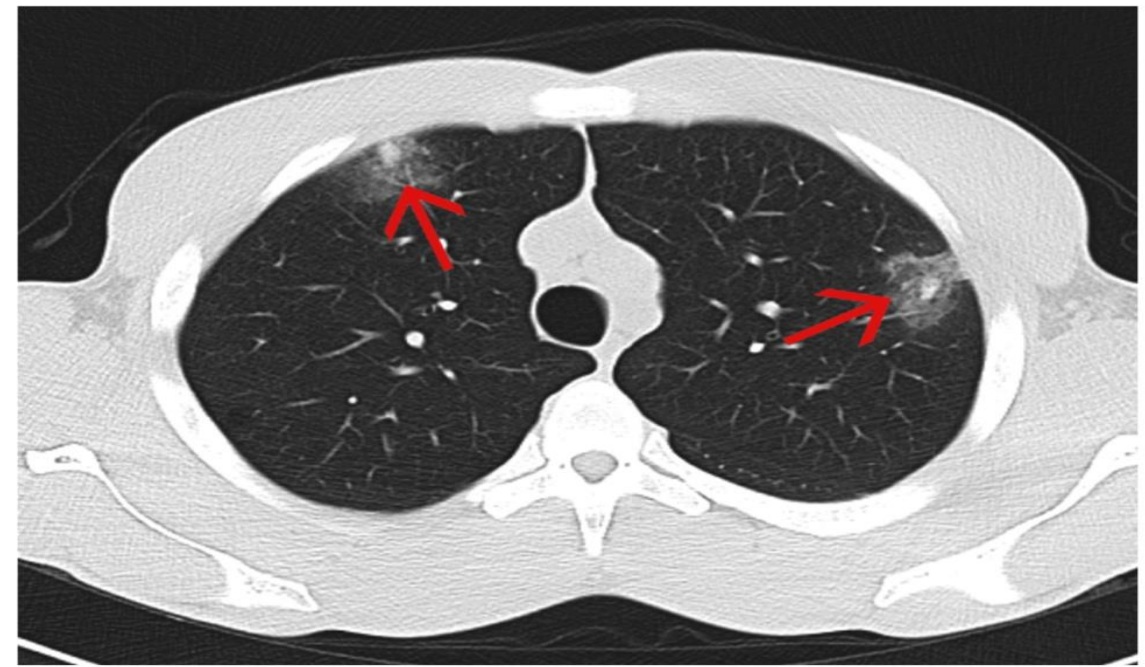
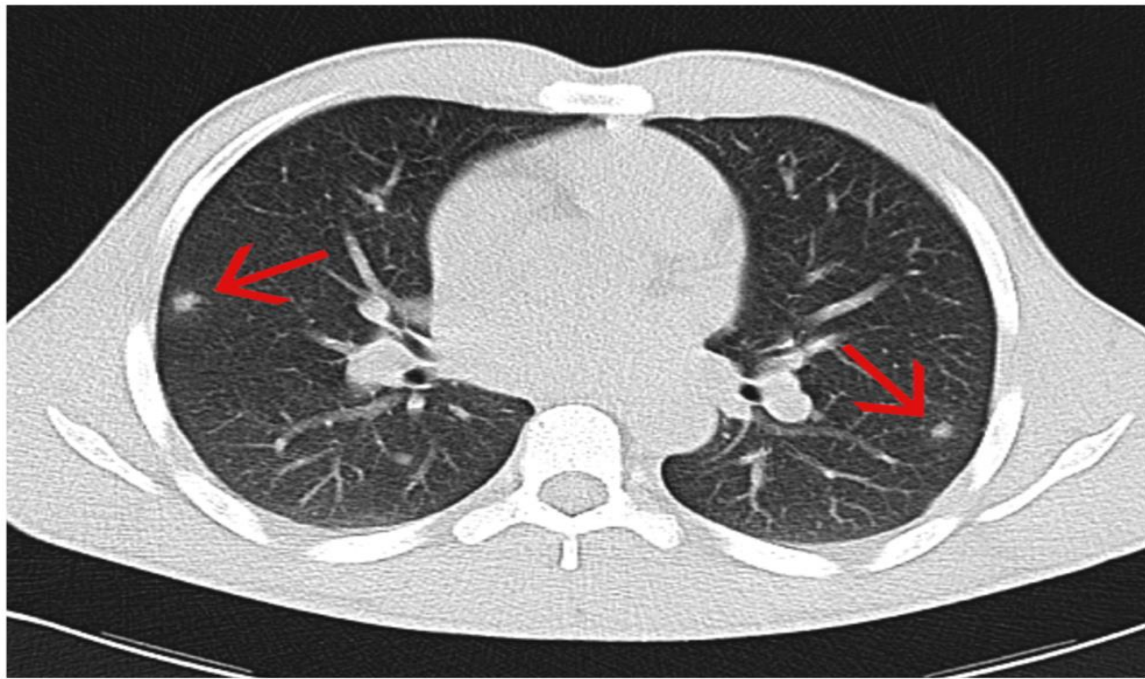
Global distribution of schistosomiasis



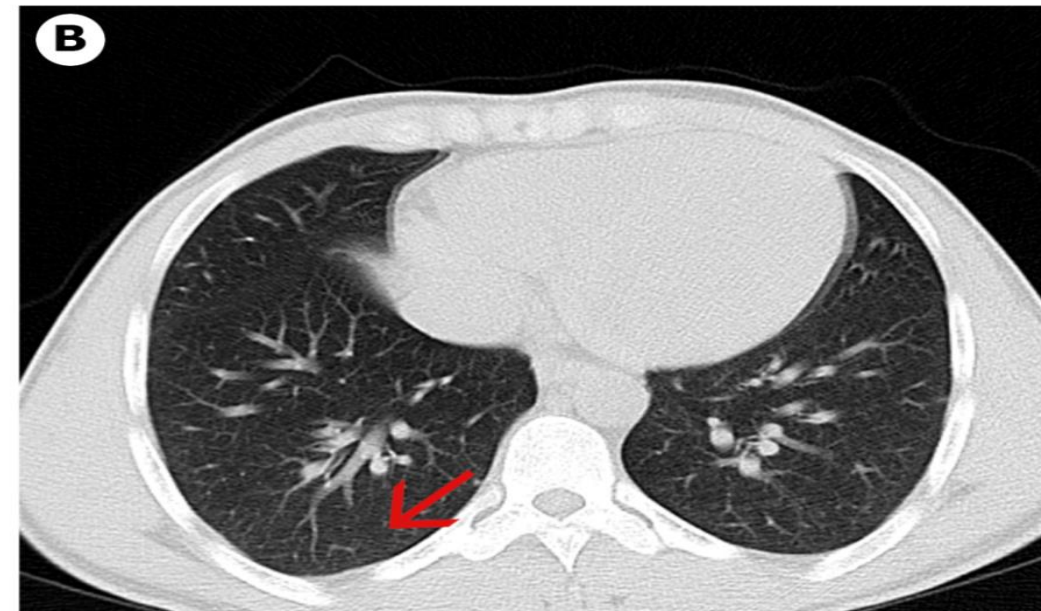
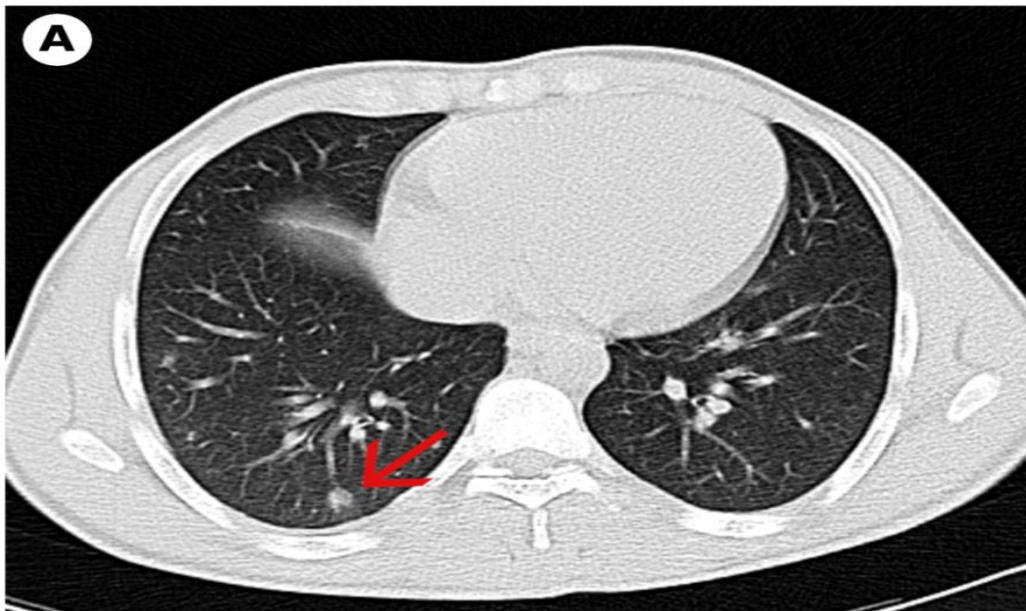
Schistosoma in the mesenteric veins





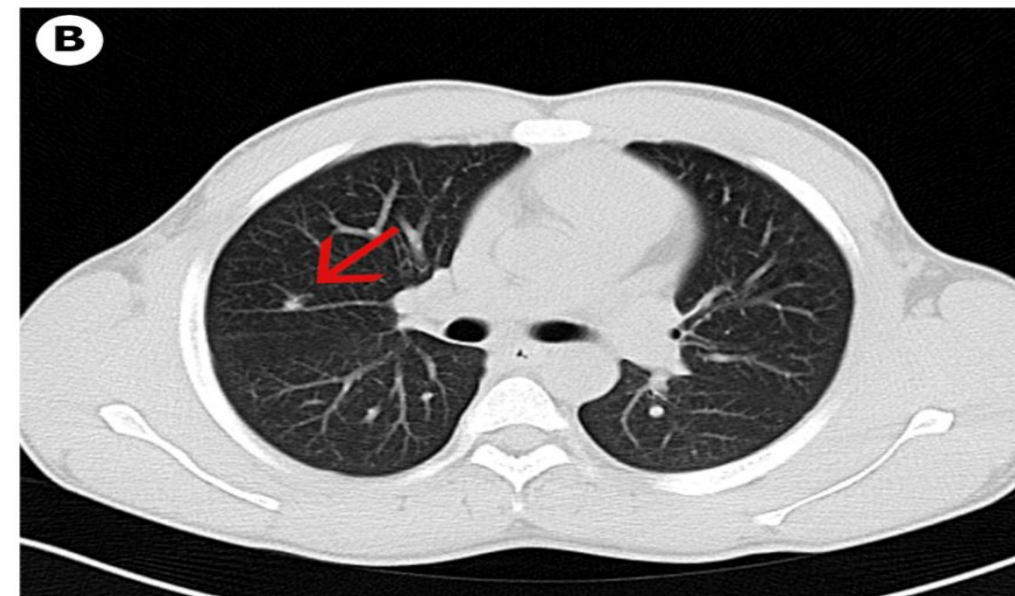
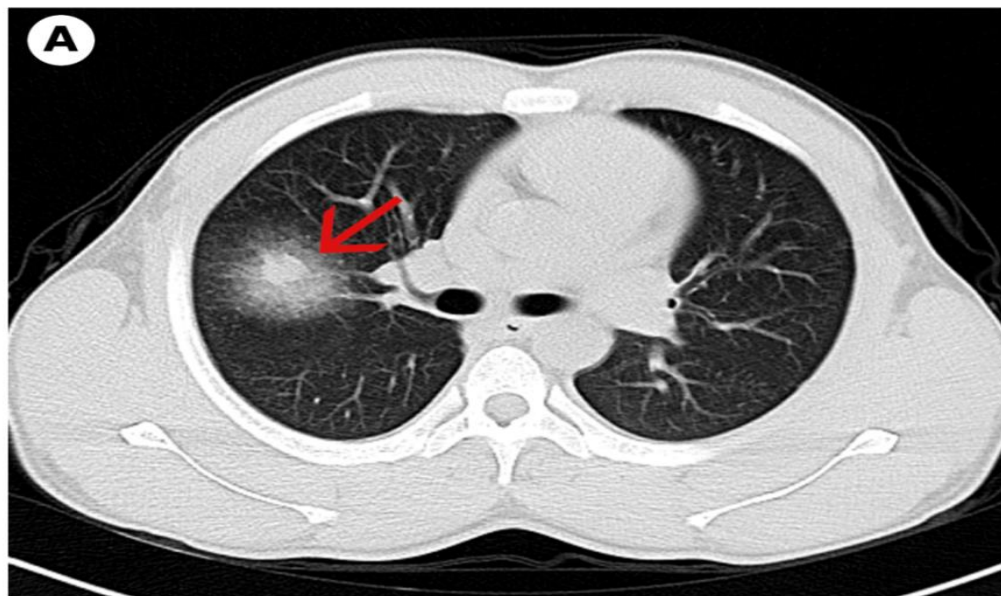


Patient 6



90 days after treatment

Patient 7



Schistosomiasi in rifugiati africani

Table 1 Results of the test according to the country of origin of sub-Saharan immigrants

Country of origin	Number of patients tested	Antibodies detection (ELISA)	Ova detection (microscopy)	Schistosoma Antigen detection (CCA)	At least one positive test
Mali	43	24 (55.8%)	19 (44.2%)	9 (20.9%)	31 (72.1%)
Ivory Coast	25	11 (44%)	11 (44%)	7 (28%)	12 (48%)
Senegal	38	13 (34.2%)	7 (18.4%)	5 (13.2%)	15 (39.5%)
Ghana	47	13 (27.7%)	7 (14.9%)	7 (14.9%)	18 (38.3%)
Gambia	30	4 (13.3%)	3 (10%)	5 (16.7%)	7 (23.3%)
Somalia	13	1 (7.7%)	1 (7.7%)	2 (15.4%)	3 (23.1%)
Nigeria	104	11 (10.6%)	6 (5.8%)	5 (4.8%)	15 (14.4%)

rifugiati dal Mali/Costa d'Avorio:
>70%/48% + per *S. haematobium*
e/o *S. mansoni* (screening???)



Test	Sensitivity (95% CI)		Specificity (95% CI)		PPV		NPV	
	CRS	LCA	CRS	LCA	CRS	LCA	CRS	LCA
CCA	29%	29%	95%	93%	78%	76%	68%	70%
	(22-37)	(21-37)	(91-97)	(89-96)				
ELISA	71%	76%	99.6%	99.4%	99%	99%	84%	88%
	(63-78)	(67-84)	(98-100)	(95-100)				
WB	92%	94%	94%	91%	90%	85%	95%	97%
	(86-96)	(88-97)	(90-97)	(85-95)				
ICT	96%	96%	83%	79%	78%	72%	97%	97%
	(91-99)	(90-99)	(77-87)	(73-84)				
Micro	45%	48%	100%	99%	100%	98%	74%	77%
	(37-54)	(39-57)		(96-100)				

Table 2 Accuracy and predictive values according to Composite Reference Standard (CRS) and to Latent Class Analysis (LCA)



Schistosomiasis transmission in Europe



Caso clinico

Immigrant from Ghana, 38 years

- Diagnosis of non Hodgkin lymphoma
- Starts chemotherapy
- Sudden onset of septic fever, septic shock
- Paralytic ileus, ARDS.....
- Exitus
- The cause: disseminated strongyloidiasis, invading the whole body

Larvae in the gastric juice



Eggs and larvae in bronchial fluid







Adult female of *Strongyloides stercoralis* collected in bronchial fluid. Scale bar = 400 μm .

Severe strongyloidiasis: 67% patients under steroids

Table 1 Patients under steroid treatment: reasons for prescription

Condition	N (%)	References
COPD/asthma/lung fibrosis	30 (18.3)	[48,49,52,57-59,68,99,101,118,121,123,128,137,146,153,180-183,185,187,188,192-196]
Leukemia/lymphoma	13 (7.9)	[9,17,23,25,37,47,56,98,111,126,162,186]
SLE	9 (5.5)	[41,64,66,86,151,176,197,198]
Rheumatoid arthritis	4 (2.4)	[83,103,199,200]
IBD	6 (3.6)	[59,147,148,164,177,201]
Sarcoidosis	2 (1.2)	[65,132]
Cancer	8 (4.8)	[30,54,93,97,112,160,169,202]
Organ/bone marrow transplant	25 (15.2)	[21,25,29,31,39,48,51,54,60,70,71,74,76,81,87,88,90,92,94,142,145,150,184]
Glomerulonephritis/CRI	6 (3.6)	[16,18,20,129,130,154]
"Idiopathic" eosinophilia	3 (1.8)	[7]
Multiple myeloma/myelodysplasia	6 (3.6)	[72,185,203-206]
Aspecific symptoms	2 (1.2)	[85,166]
Other clinical conditions	46 (28)	[17,22,34,36,54,59,66,84,89,100,102,110,113,124,125,127,133-135,140,155,159,171-174,207-213]
HIV-related opportunistic infections/IRIS	4 (2.4)	[24,26,36,105]

Other conditions (no steroids):

HTLV 1

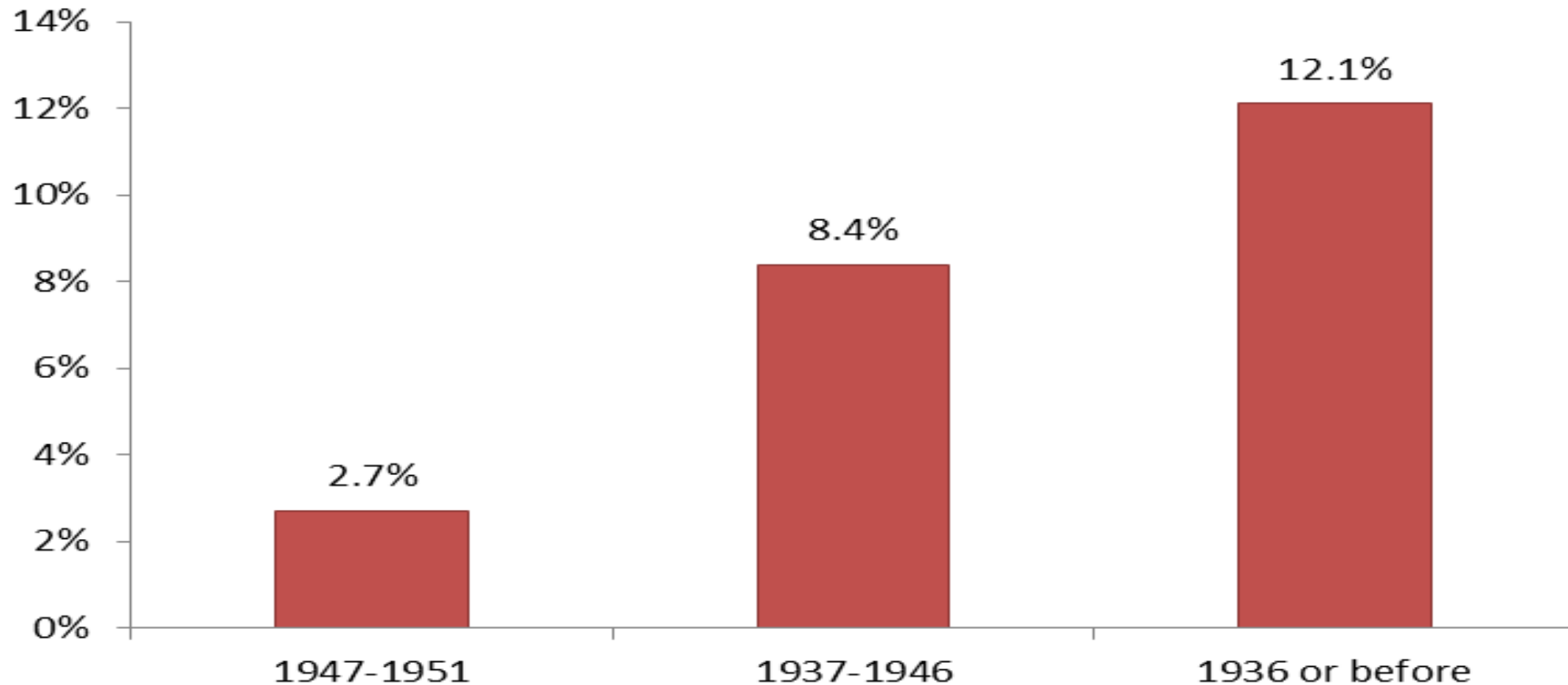
HIV

Alcoholism

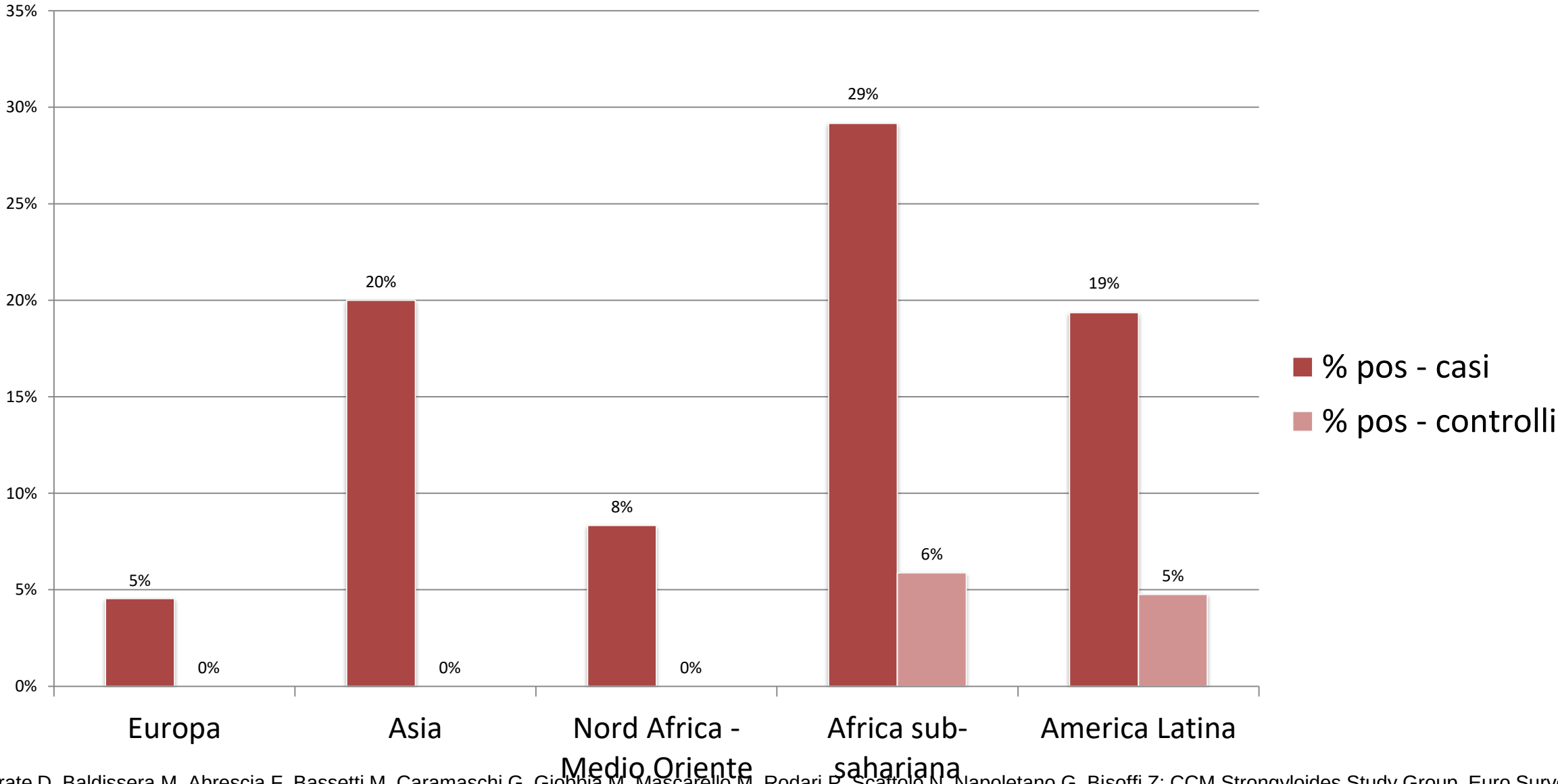
Malnutrition

Transplant

Prevalence of strongyloidosis in three Northern Italy regions (subjects born before 1952)



Prev Ss in foreigners with and without eosinophilia (cases and controls)



Ivermectin, the wonder drug

‘Wonder’ drug attracts global health award

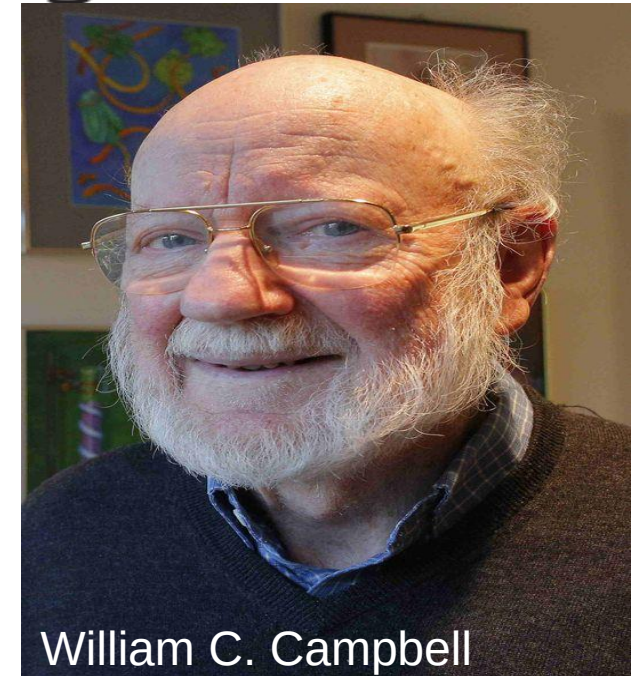


THE LANCET **Global Health** Blog 26th Mar 2014



Satoshi Ōmura

**Nobel prize
2015**



William C. Campbell



WHO Collaborating Center on strongyloidiasis
and other intestinal parasitic infections

Any progress?



Ivermectin: A Drug Worthy of a Nobel Prize, but Inaccessible for Those Who Need It

22 October 2015



Sistema nazionale per le linee guida

I controlli alla frontiera La frontiera dei controlli

Controlli sanitari all'arrivo
e percorsi di tutela per i migranti
ospiti nei centri di accoglienza

Lg
LINEA GUIDA

SALUTE MIGRANTI

1

R9.4 – Nei migranti, anche asintomatici, che hanno vissuto o viaggiato in aree endemiche per strongiloidosi * e schistosomiasi (si veda allegato 6), è raccomandato l'esame sierologico, nell'ambito della presa in carico sanitaria. Il riscontro di sierologia positiva per *Strongyloides stercoralis* e *Schistosoma spp*, in soggetti non trattati di recente, deve essere considerato come infezione in atto e come tale meritevole di trattamento. **Grado A**



Strongyloides uccide!

Grazie