

Long Term Antibiotics for Lyme Disease with Persistent Symptoms - A Pilot Project with 468 Patients

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An invitation to the Third European

**CRYPTO-INFECTIONS CONFERENCE:
LYME DISEASE & OTHER HIDDEN INFECTIONS**

MICROBIAL PERSISTENCE

Saturday 17th June to Sunday 18th June 2023
Catherine Mc Auley Centre, 21 Nelson Street, Dublin 7, Ireland



Background

- Many patients experiencing chronic symptoms after a clinical syndrome consistent with Lyme disease are excluded from care and treatment because of a negative serological test based on criteria set for epidemiological rather than clinical purposes

Background

- Quebec is bordered south by 3 US states that have the highest incidence rates of Lyme disease since the last 10 years
- Ticks habitat are moving north
- Eastern Canada: Population living in an area with established tick

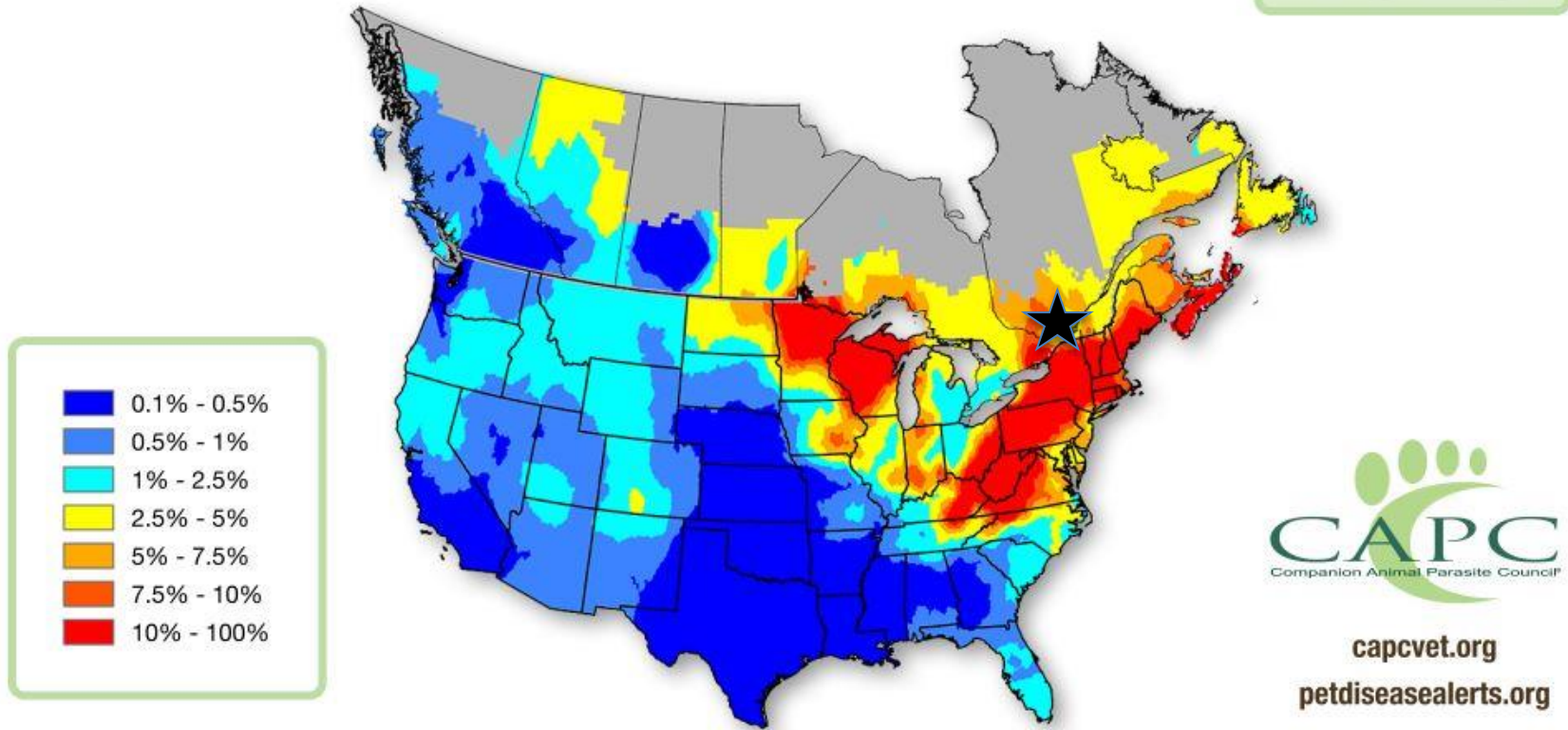
2010 **18%**

2020 **80%**

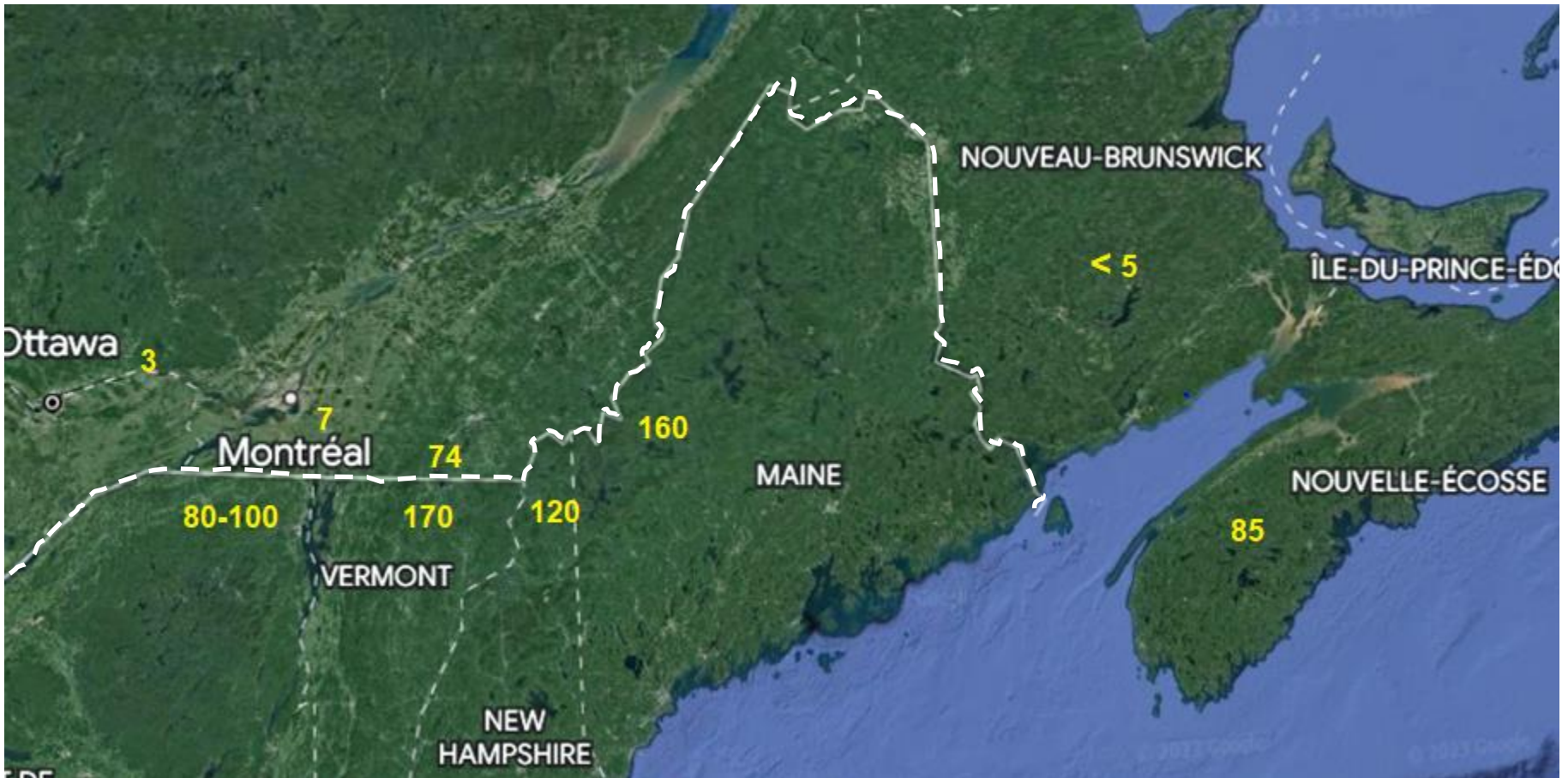
Quebec- Emerging Epicenter of Lyme Disease?

Forecasted Prevalence of Lyme Disease

2023



Quebec- Emerging Epicenter of Lyme Disease?



Objective

- The aim of this study is to describe the CMTV cohort
- investigate the effectiveness of long-term antibiotic treatment on the reduction of the burden of disease in chronic LD patients (CLD)

Methods

- Pilot project
- Observational study
- Clinical cohort
- Single site: Clinique des maladies à transmission vectorielle (CMTV) is a specialized hospital-based clinic within the public health system for tick-borne diseases
- Inclusion criteria: All patients consulting CMTV 2019-2023

Methods

- Data: medical history, clinical findings, laboratory, treatment and outcomes, were retrospectively and prospectively collected from chart review
- Horowitz questionnaire was used to evaluate the case severity and probability of tick borne disease
- Outcome: assessed by the physician by a combination of qualitative and quantitative scores to measure the improvement of the functional capacities
- Analyses: Chi² for proportions and logistic regression.
- Analyses were done using SPSS.

Definitions

Patients were classified based on laboratory testing, clinical data and epidemiological evidence

- **PROVEN CLD:**

positive EIA and/or Erythema migrans (EM)
regardless of WB but with
compatible symptoms & epidemiological evidence

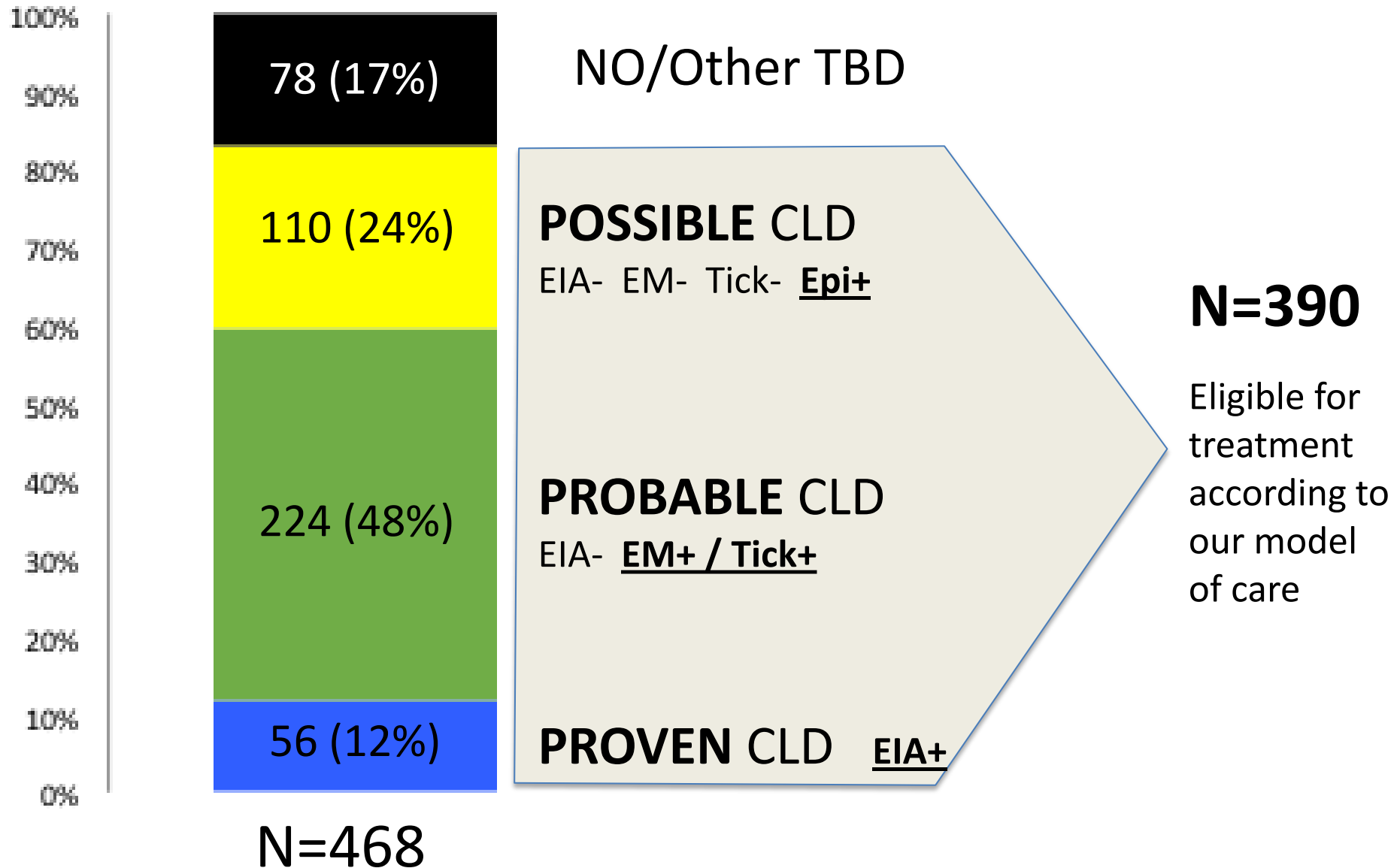
- **PROBABLE CLD:**

EIA and EM negative patients
having observed tick bite
before the course of their compatible symptoms

- **POSSIBLE CLD:**

negative EIA and no EM or tick bite
but convincing clinical syndrome
with strong epidemiological evidence

CMTV's cohort patients



CMTV's cohort description (N=468)

Patient's features	N=468	%
Gender		
Male	155	33%
Female	313	67%
Age (med, Range)	47 y (6 – 86)	
Lyme experience in the family	79	17%

Disease Burden of our Patients

Disease burden	N	%
On sick leave/invalidity	178	38%
Suicidal ideas/attempt	37	8%
Medical Aid in Dying	5	1%

Pre TBD Health Service Utilisation

Pre TBD Clinic Health service utilisation	N=468	%
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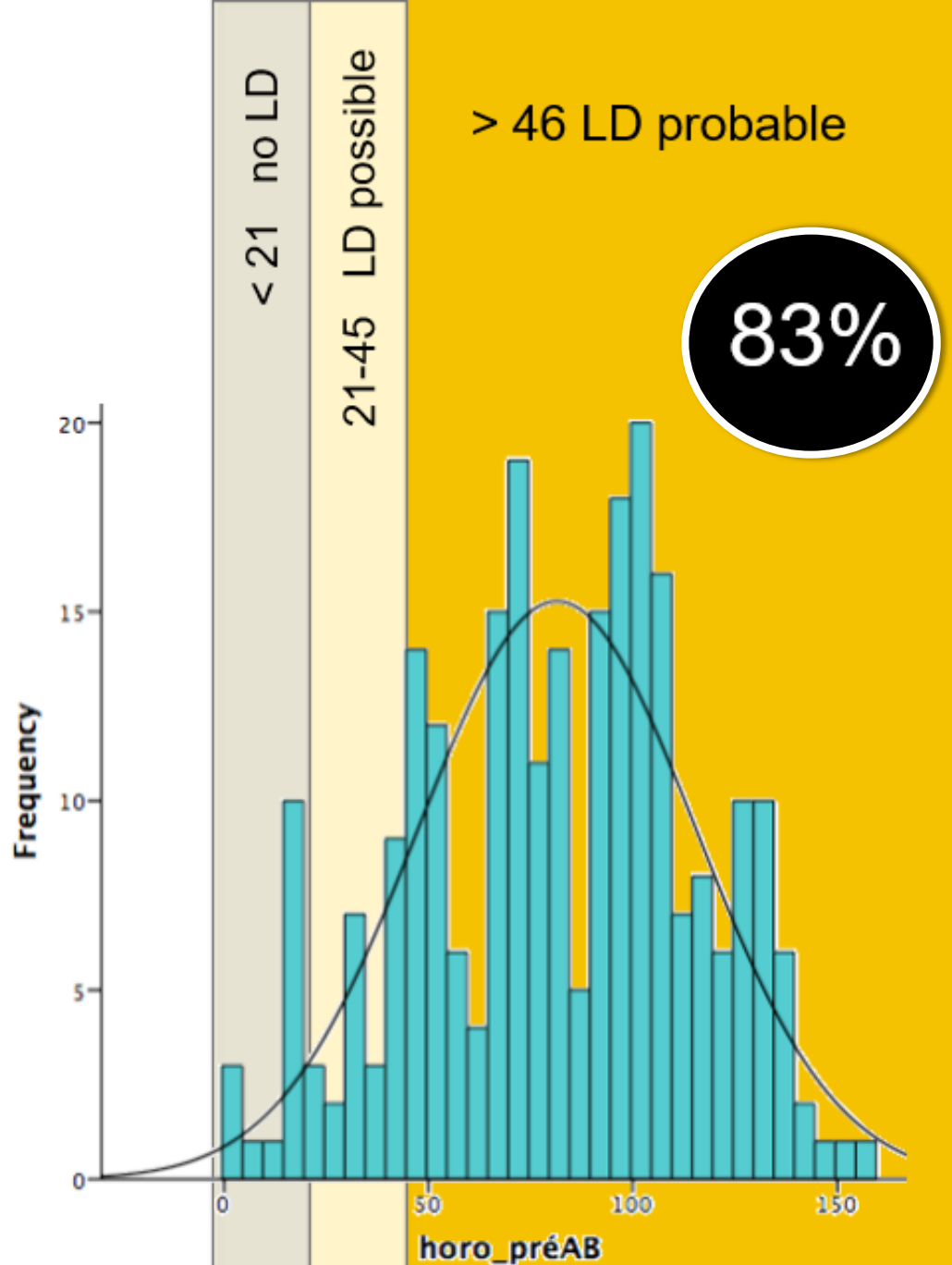
Nb specialities consulted (mean, IQR)	3,5	(1-4)
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Seek care outside Quebec

MD (mostly in USA)	49	10%
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Lab test (USA/Germany)	91	19%
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Horowitz Score at T_0



N= 261
Median = 83

Choice of treatment

Doxy

Azithro

Rifampin

Septra

Cefuroxime

Plaquenil

Ceftriaxone

Malarone

Amox

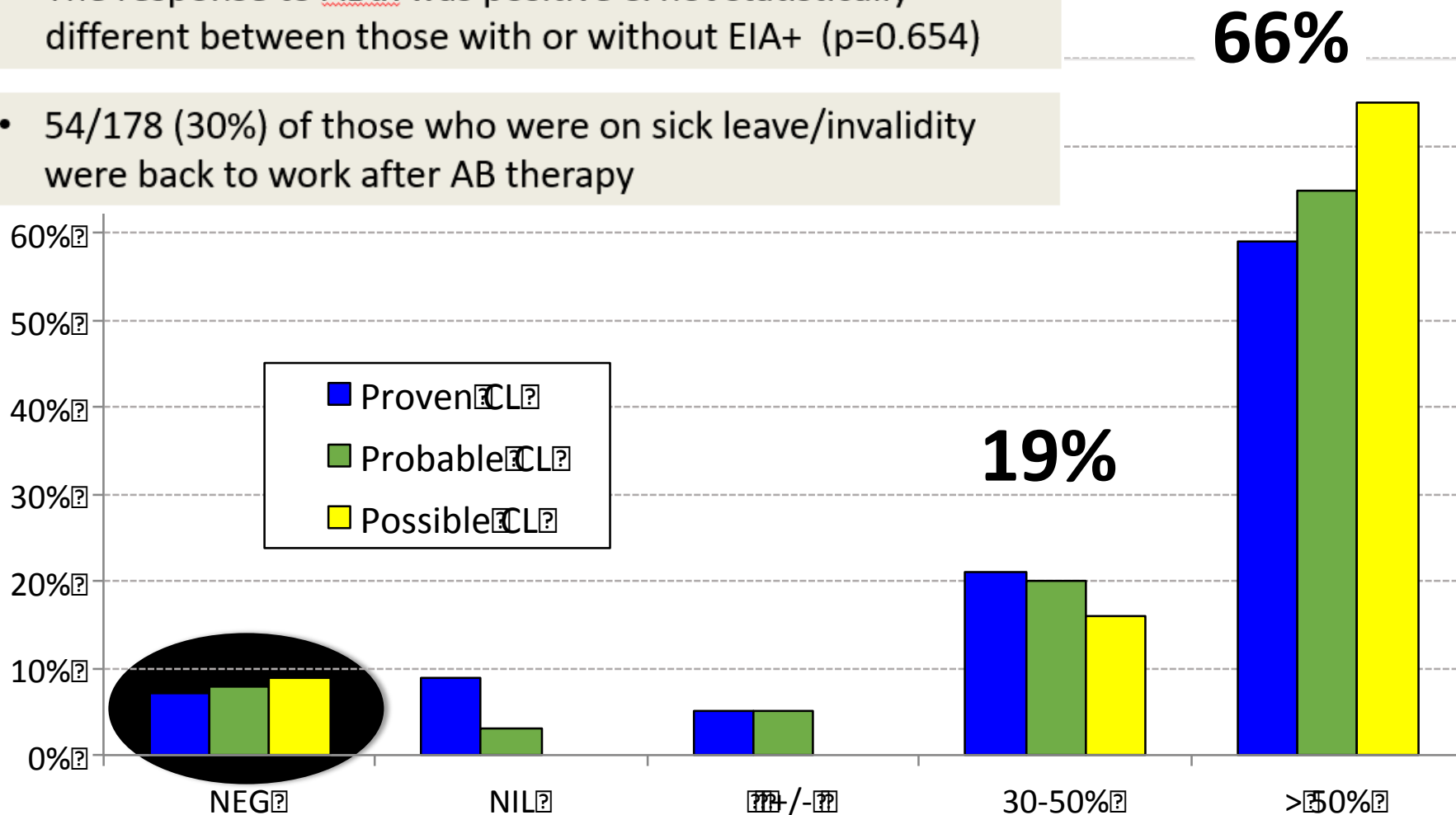


1st line of choice: D / A / R

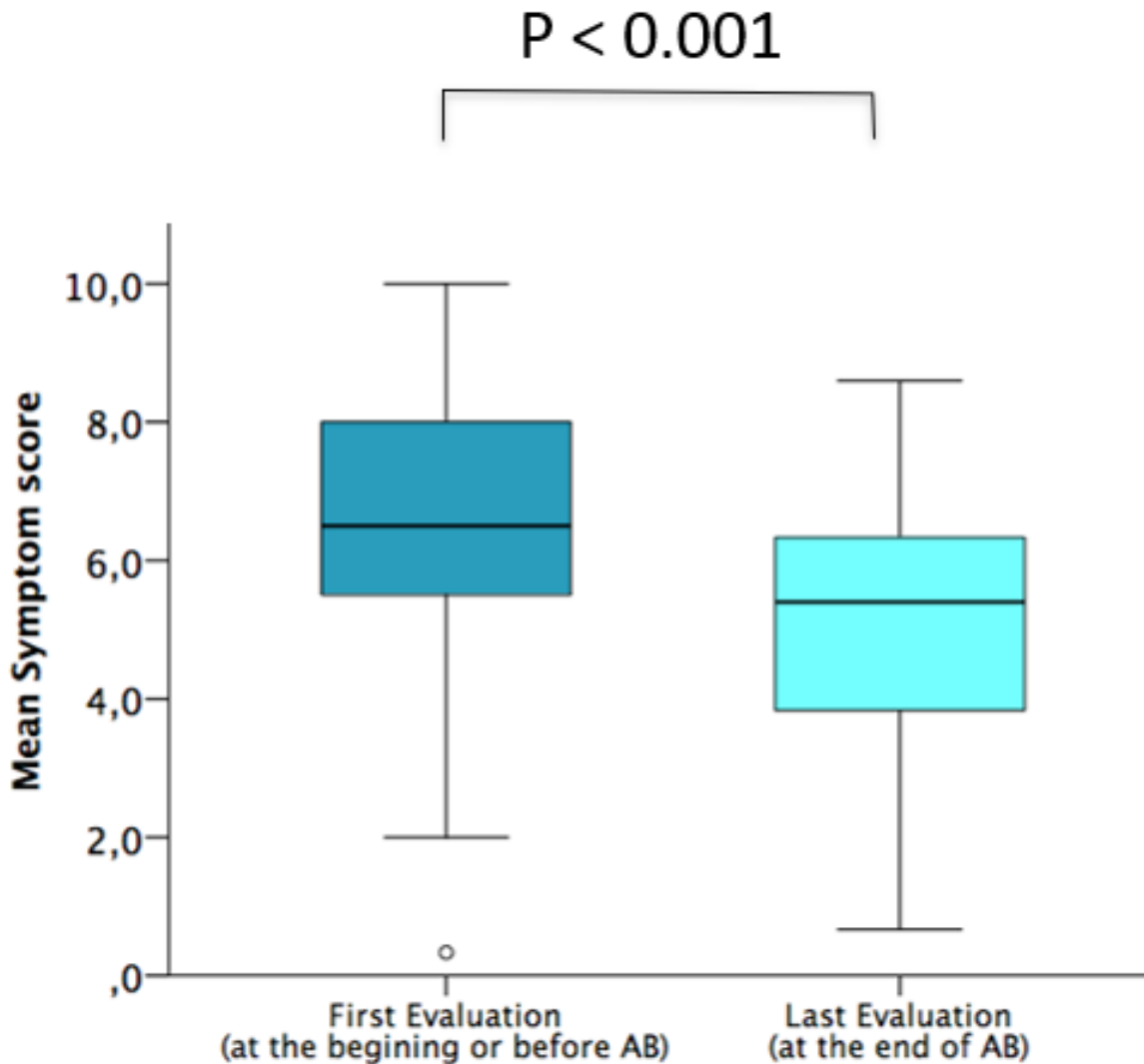
AB duration		N	%
> 3 months	⇒	218	83%
> 6 months		183	75%
> 9 months		151	63%
> 12 months		124	51%

Impact of Long Term AB Treatment for LD with Persistant Symptoms (N=390)

- The response to ABtx was positive & not statistically different between those with or without EIA+ (p=0.654)
- 54/178 (30%) of those who were on sick leave/invalidity were back to work after AB therapy



Reduction of Symptoms after AB



N=49
based on patient's
auto-evaluation
of they major
symptoms

AB treatment did
not **eliminate**
but
aliviate
the symptoms

Conclusion

- Long-term AB clinically improved treatment outcomes among patients with persistent Lyme symptoms.
- Significant treatment effectiveness was observed in seropositive chronic Lyme patients as well as in those who would not receive treatment if positive two-tierd Lyme serological testing was required as an eligibility criteria.
- More studies are warranted to establish the most appropriate duration and antibiotic combination for the treatment of chronic Lyme disease.

Limits

- The study did not include controls
- Clinical cohort : the timeline for outcome measurement are not standardised / equivalent
- Follow-up was not yet completed for all patients
- Results are preliminary

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- Lyme patients and their associations AQML and CanLyme
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- Sophie Finger – reception clerk
- Karen Apreo – registered nurse
- Jessica Thompson – patient and professional collaborator
- Tannis Nelson – Under graduate student
- Mickerline Désirade – Graduate student

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PATIENT REGISTRY 2018 – 2023

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