

Hemorrhagic Fever In Iraq

Where we are

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Disclaimer

- The author declare no conflict of interest to introduce this article.

Haemorrhagic fever

serious viral infection may be a life threatening .

Caused by many viruses

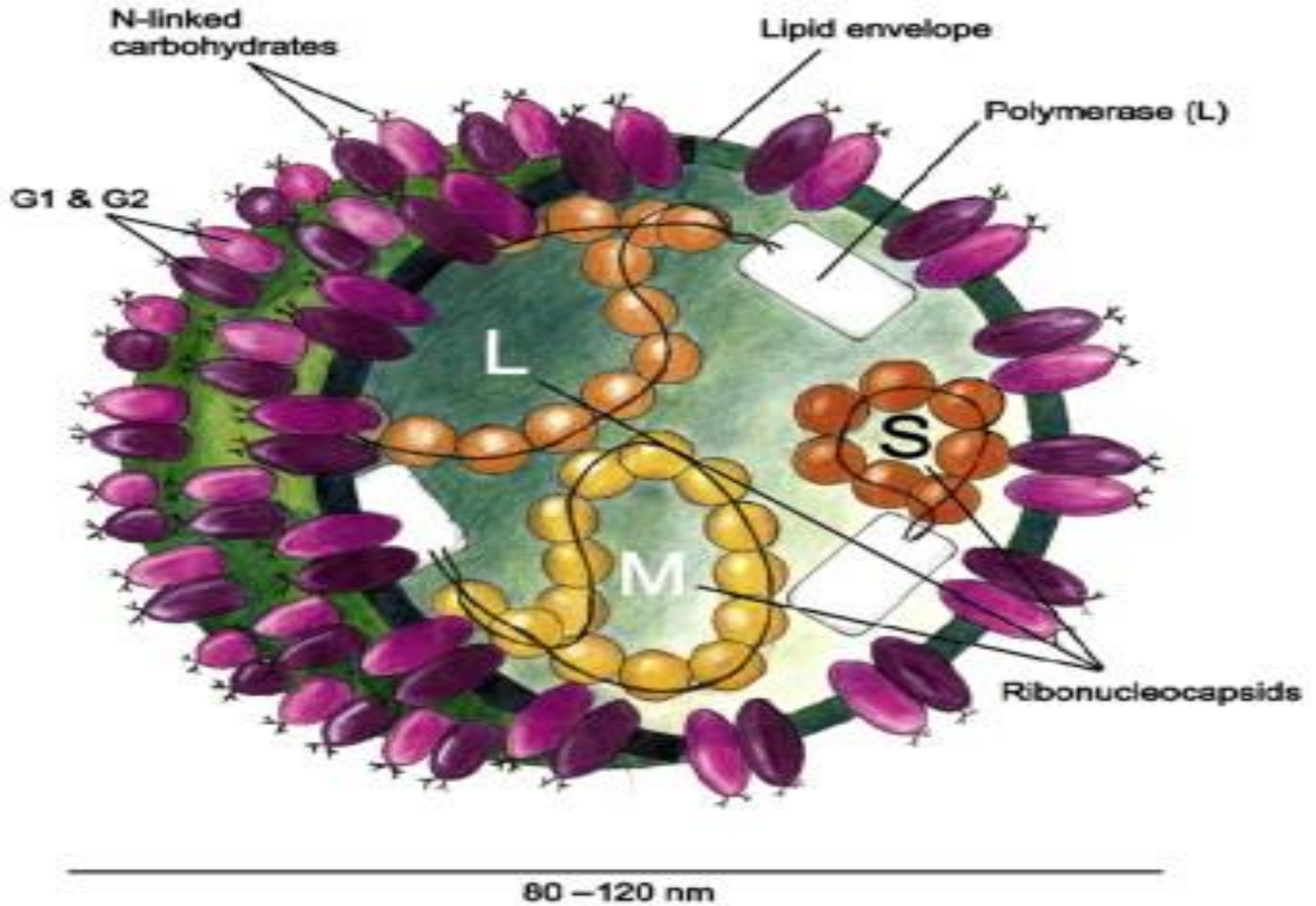
zoonotic and has geographical distribution

- Lassa fever transmitted to human from rat urine or patients body fluids commonly in west Africa .
- Ebola fever from bats to human commonly in central Africa .
- Yellow fever by mosquito *Aedes Africanum* in tropical Africa ,south and central America.

Crimean Congo hemorrhagic fever
virus (CCHF)
the most common

Rift Valley virus
Less common

Virology



Transmission

- tick bites.
- contact with infected animal blood or tissues.
- Human-to-human transmission.
- Hospital-acquired infections



Ixodes ricinus life cycle

as an example
of a three host tick



Adult females
feed for 5 - 14 days
on a suitable host,
mostly large mammals.



Depending on climatic
conditions full cycle
takes 2 to 3 years.

4. Eight-legged adults
develop from nymphs after
molting in the environment.



Nymphs feed
4 - 6 days on a
suitable host,
mostly medium
sized mammals.



3. Eight-legged nymphs
develop from larvae after
molting in the environment.



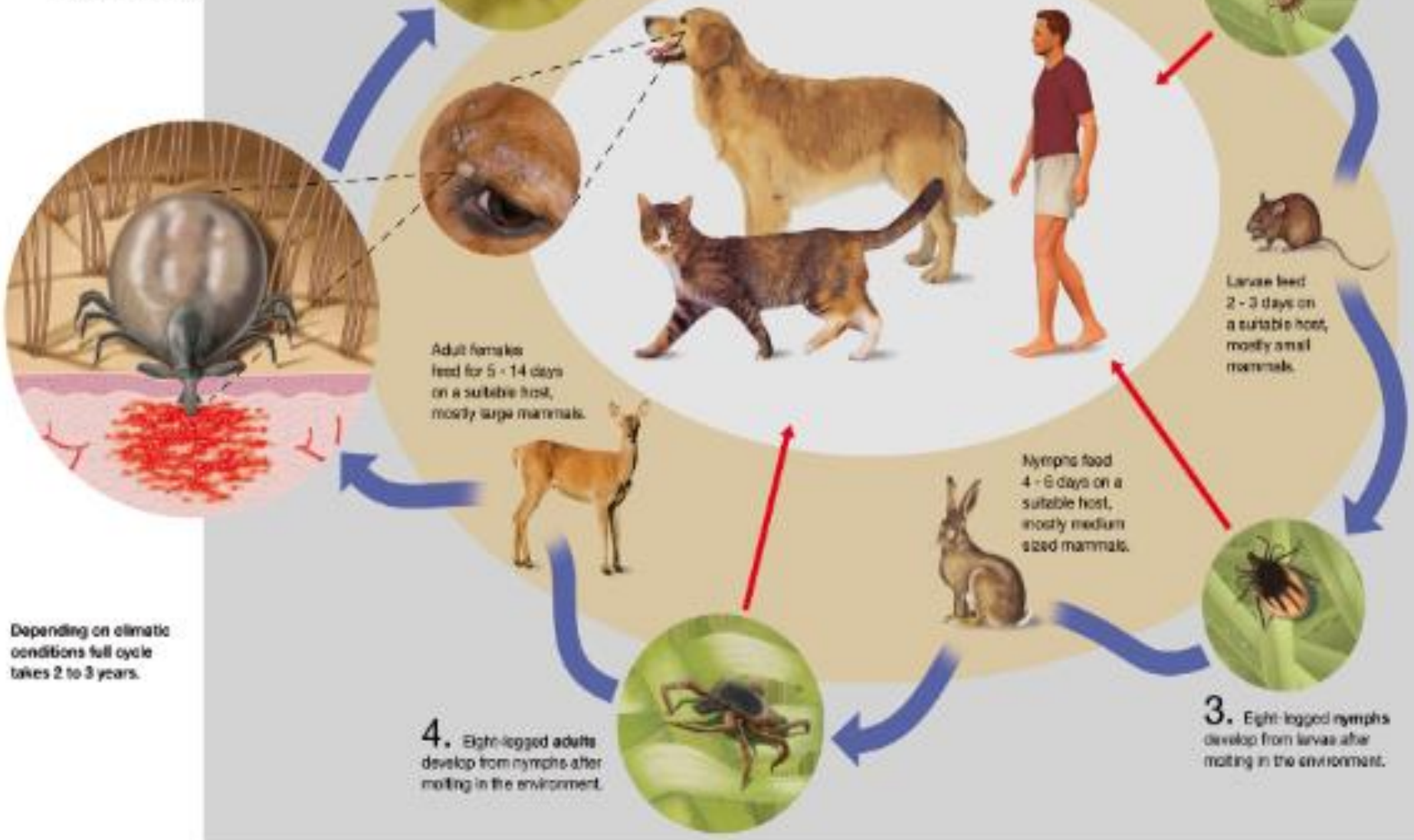
Larvae feed
2 - 3 days on
a suitable host,
mostly small
mammals.



2. Six-legged larvae
hatch from eggs in the
environment.



1. After mating, mostly
on the host, female ticks
lay 3000 - 4000 eggs
in the environment and die.



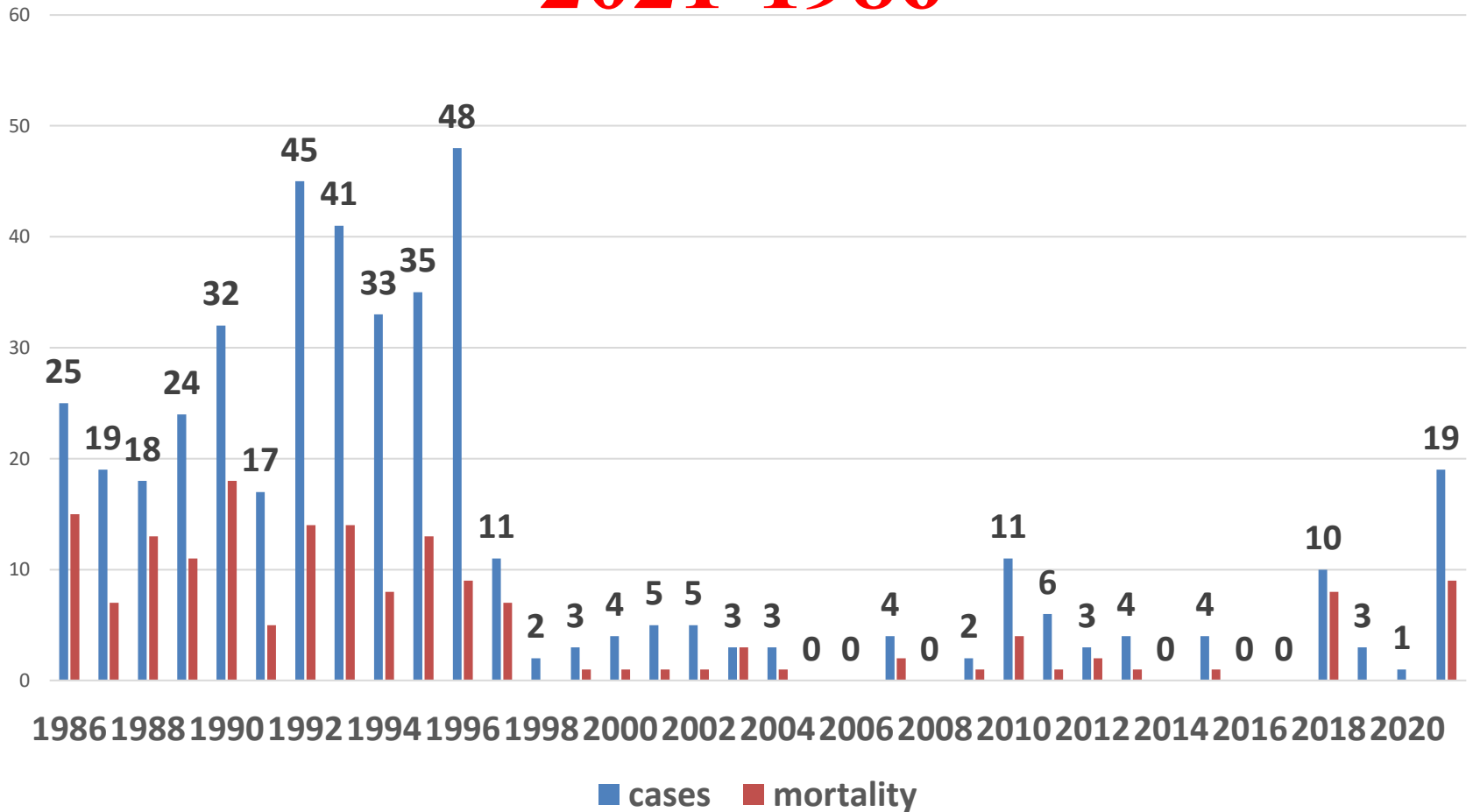
Tick



CCHF In Iraq

- Iraq exposed to hard strike in
- 2021-2022.
- Hard work through medical personal
- Collaboration with WHO

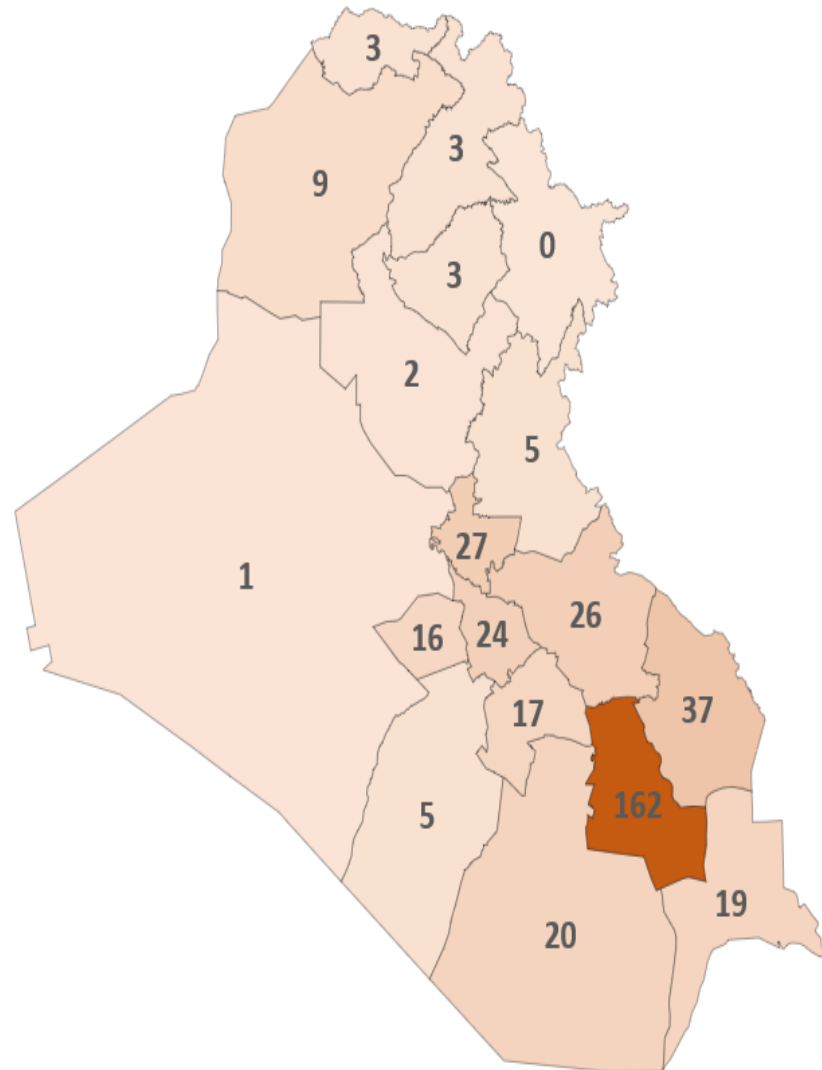
Number of cases and mortality 2021-1986



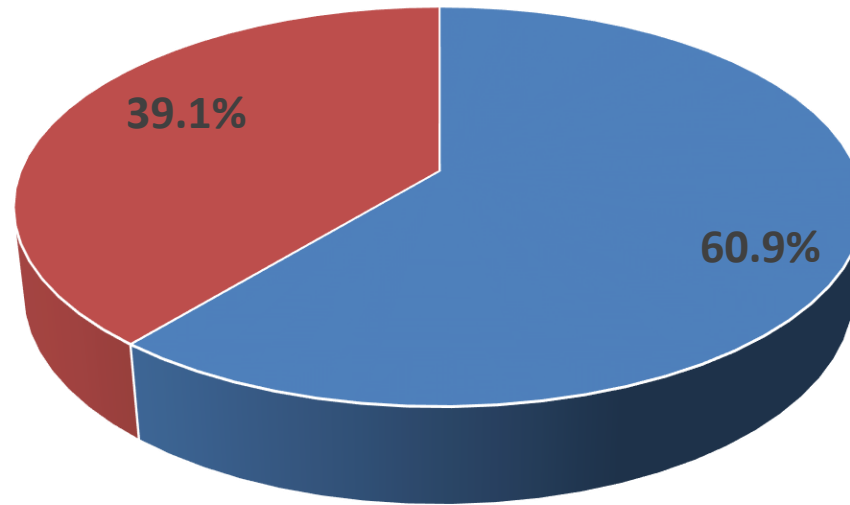
Governorate variability

- Differ in numbers
- In mortality.
- severity

Distribution of cases according to provinces 2022

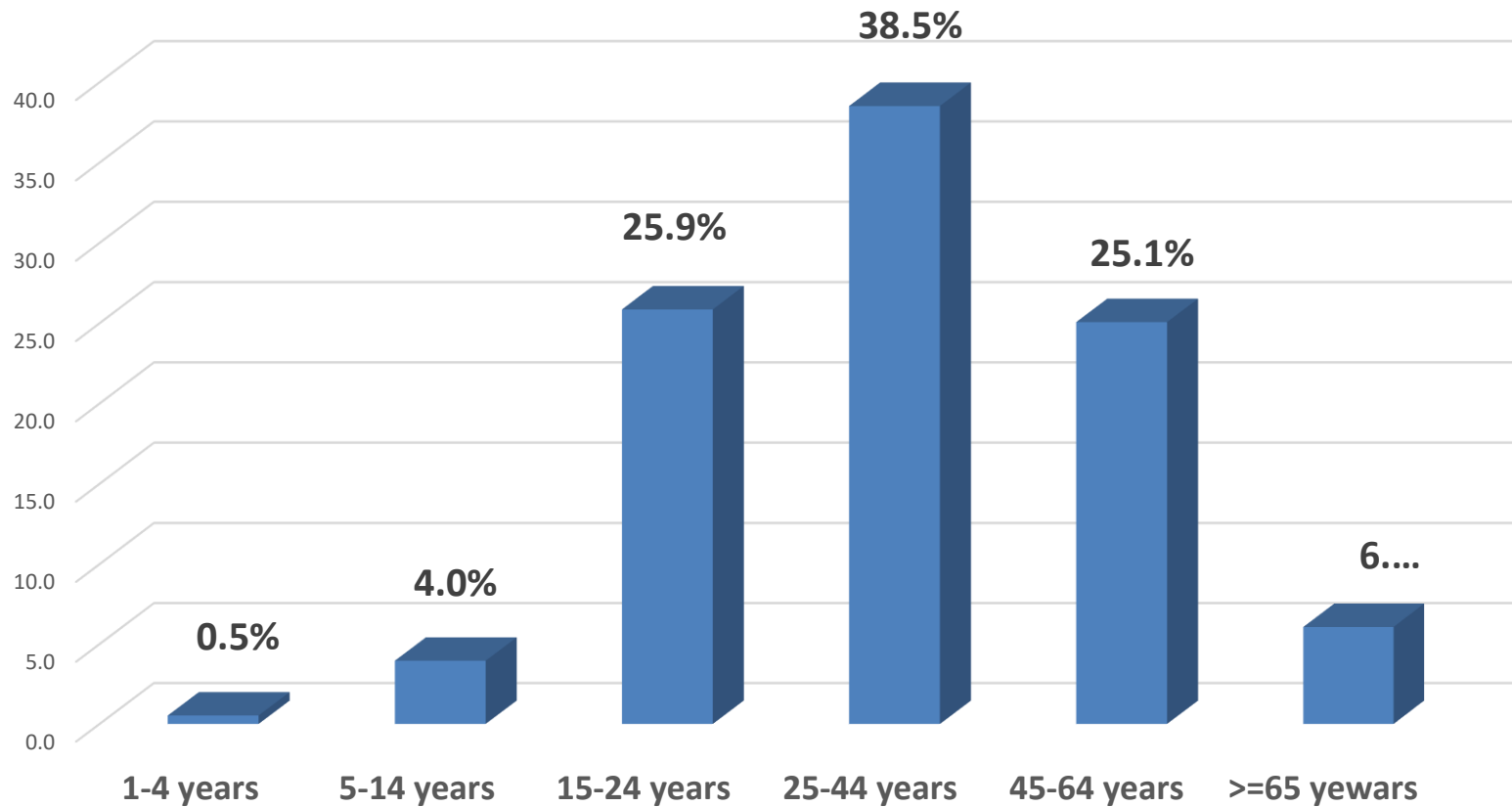


Distribution of Cases according to Gender

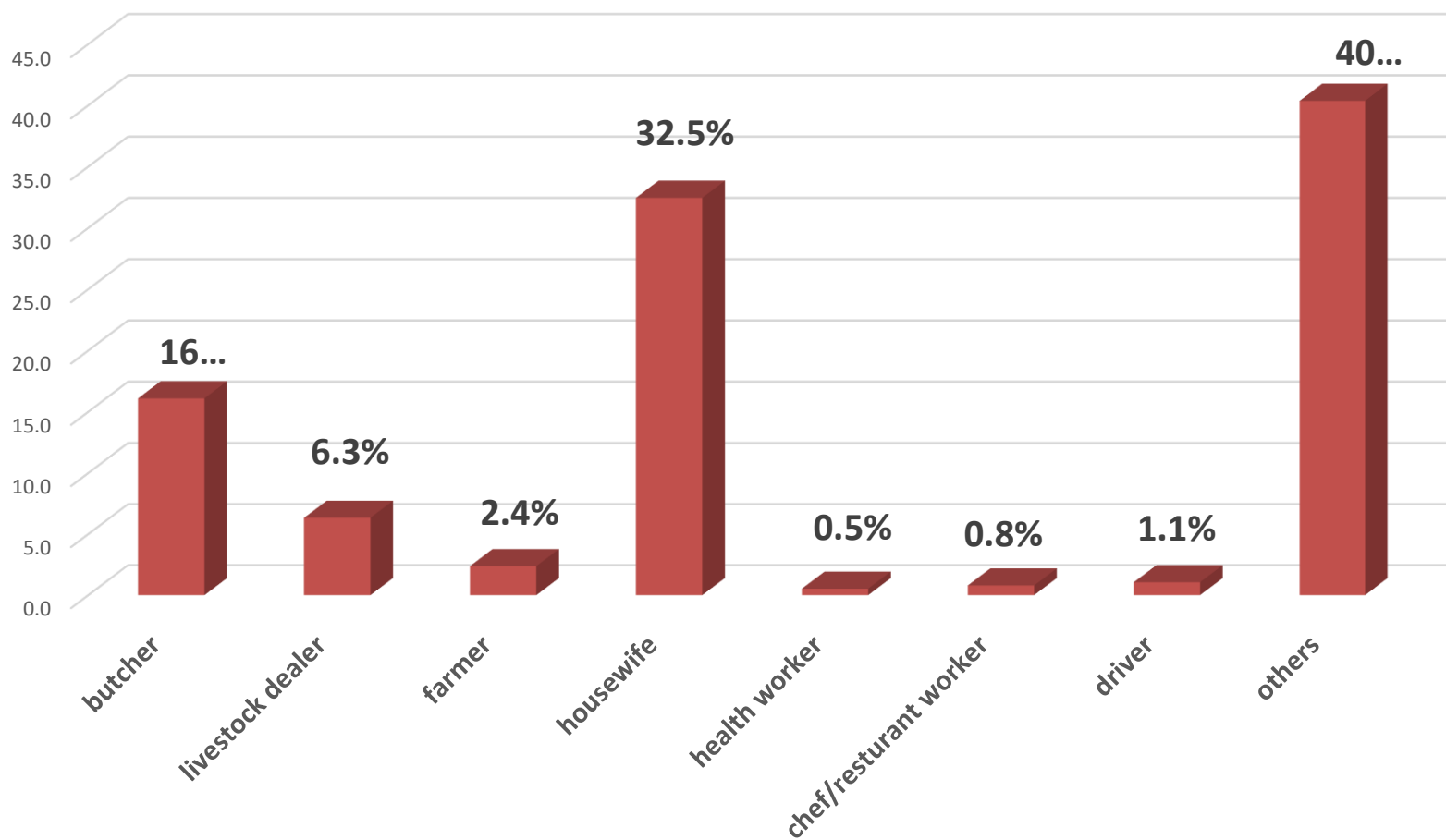


■ Male ■ Female

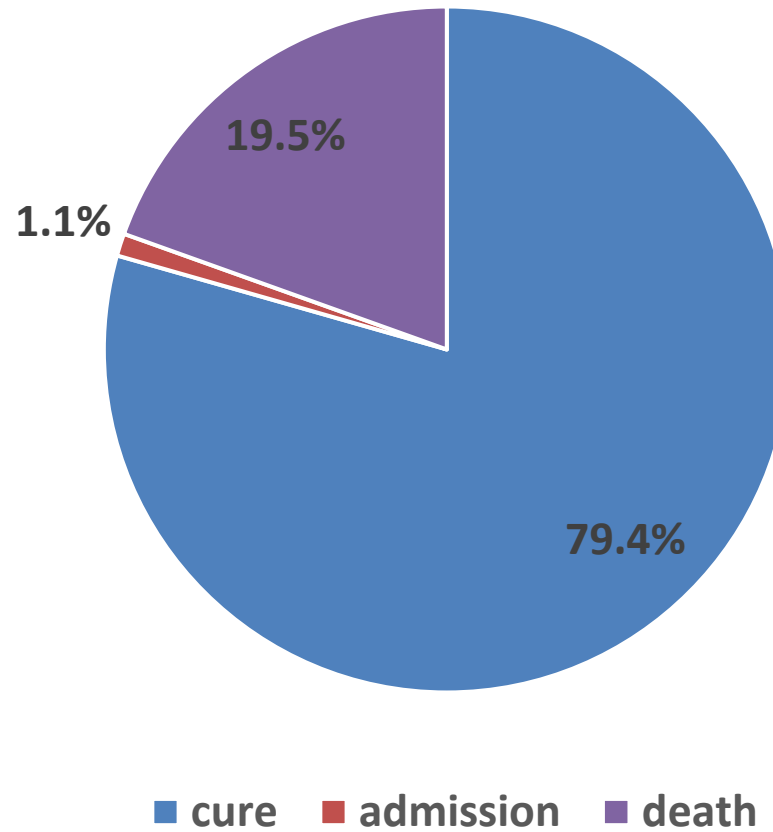
Distribution of Cases by Age-group



Distribution of Cases according to Occupation



Patient outcome



Clinical and Laboratory course of CCHF

Ergonul IO, Lancet ID, 2006

- • • Platelets
- White blood cells
- Aspartate aminotransferase
- Alanine aminotransferase

PCR: first 9 days

IgM (7 days–4 months) and IgG (7 days–5 years)

Myalgia
Fever
Nausea, vomiting
Diarrhoea

Bleeding from various sites
(haematemesis, melena, etc.)
somnolence

: Clinical and laboratory course of CCHF

DIC

Fever

Death

7 days

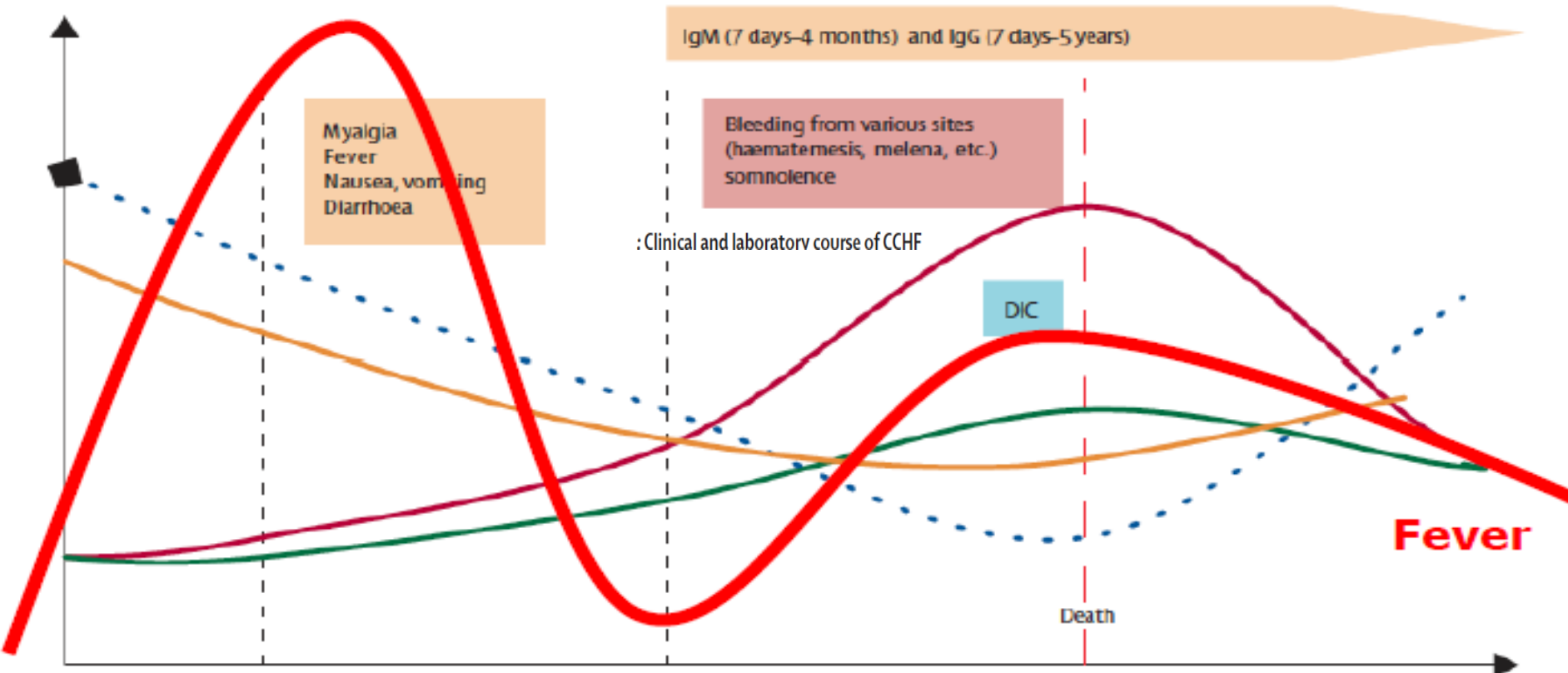
10 days

Incubation
3-7 days

Prehaemorrhagic period
1-7 days

Haemorrhagic period
2-3 days

Convalescence



Patient refer for medical aid

Standard PPE for examination of all patients during first medical aid:
gloves + surgical mask and goggles (if bleeding)

Acute onset, fever, residence in endemic area during season of tick activity

Acute onset, fever + epidemiological anamnesis for CCHF (habitation, occupation, visiting nature, tick bite, contact with tick, contact with probable or confirmed CCHF case, etc.)

Suspected CCHF case;
PPE: gloves + surgical mask

Daily examination of thrombocytes, leucocytes, ALT, AST

Developing of hemorrhage without any other preconditions

↓ thrombocytes ± ↓ leucocytes
± ↑ ALT, AST

Consultation of hematologist

Probable CCHF case;
PPE: gloves + goggles + surgical mask or respirator N95 or similar (if patient is on inhalator or ALV device)

Testing blood samples for CCHF virus:
PCR, ELISA (IgM)

Antivirals (ribavirin) administration before receiving of PCR and ELISA results

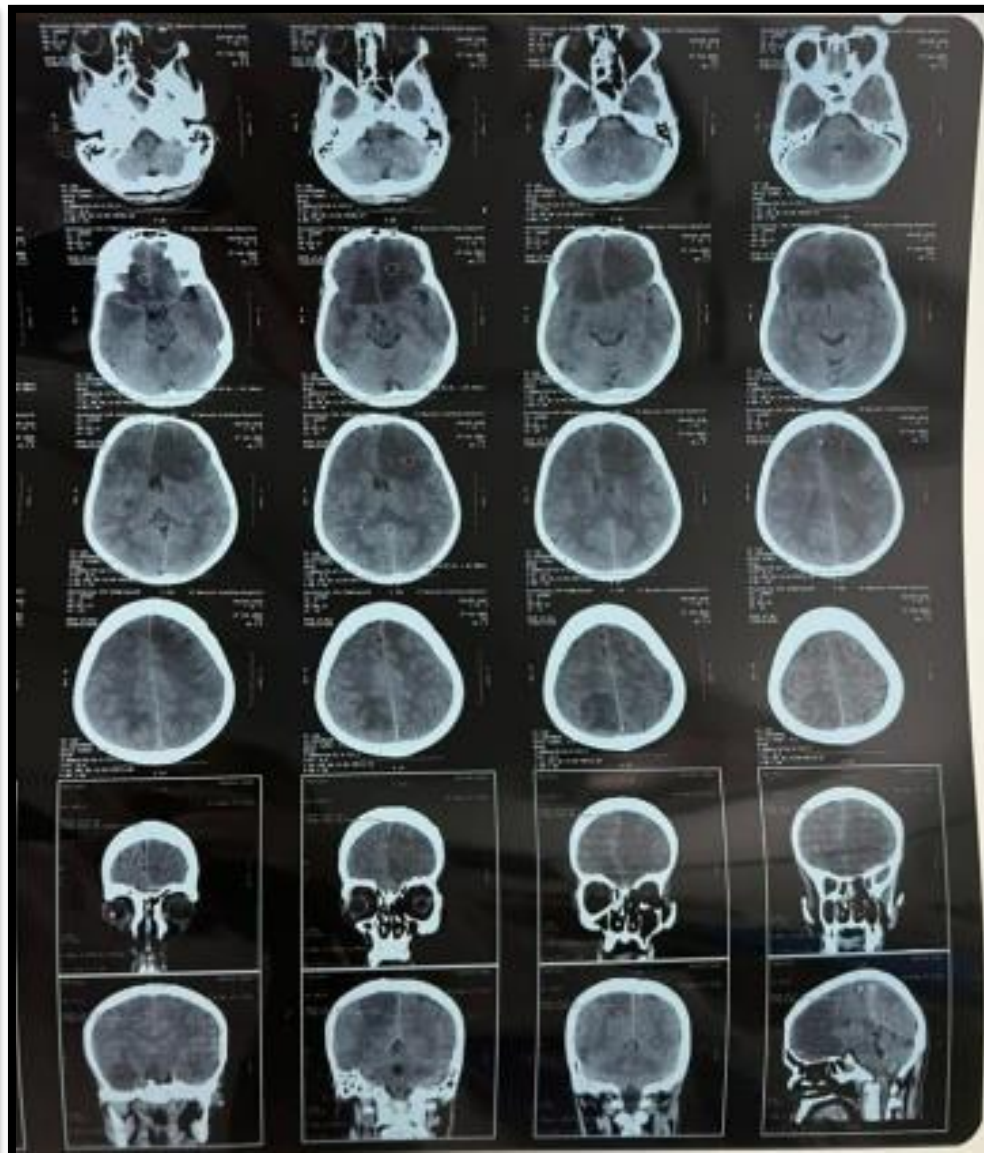
Confirmed CCHF case: PPE and antivirals the same as at Probable CCHF case

Iraqi doctors are heroes
a sample of cases in Thiqar
Governorate Hospital

CCHF deadly case female in honeymoon celebrating full recovery



CCHF middle age female case with mucormycosis and CVT/brain abscess



**CCHF with hepatic encephalopathy.
Went on to make a full recovery after
3 weeks on ICU**



WHO work hard with us

WHO team with therapists



CCHF prognostic notes

Pregnant ladies were very poor prognosis •

Less than 18 years out 16 patients 2 of them unfortunately were died.

Compartment syndrome with neuropraxia occurred in two cases •

PRES syndrome occurred in one young male (who made a full recovery) •

No human to human transmission reported •

Symptomatic animals seen in two cases and those bled to death •

Thirteen cases died with PCR negative results diagnosed on clinical grounds and lab testing and in the absence of an alternative diagnosis •

Recommendations

- 1- Need more study about life cycle of Ticks the main vector of CCHF.
- 2- further study in another viruses in Iraq and MENA region. •
- 3- Potentiate activity for CCHF vaccine in Iraq and the world •



Thank you