

VHF - CASE PRESENTATION



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Patient Background and Epidemiologic Context

Patient context

- 39-year-old female
- Resident of **Rosario**, Santa Fe Province, Argentina
- Lives and works in an urban area
- Regular outdoor activities outside the city on weekends
- No known comorbidities
- Not vaccinated against dengue, Argentine hemorrhagic fever, or yellow fever
- Completed MMR vaccination schedule

Travel history

- Travel to **Bariloche**, Río Negro, from **February 14 to 18**
- Recreational hiking
- Stayed in tents in a mountain forest area
- No similar illness among household contacts or travel companions



Initial Illness Timeline

Feb 24
Day 1



Illness onset

- Asthenia
- Myalgias
- Headache
- Retro-orbital pain

Feb 26
Day 3



Outpatient visit 1

- Fever for 24 hours
- Persistent symptoms
- Acetaminophen prescribed
- Return precautions and close follow-up

Mar 2
Day 7



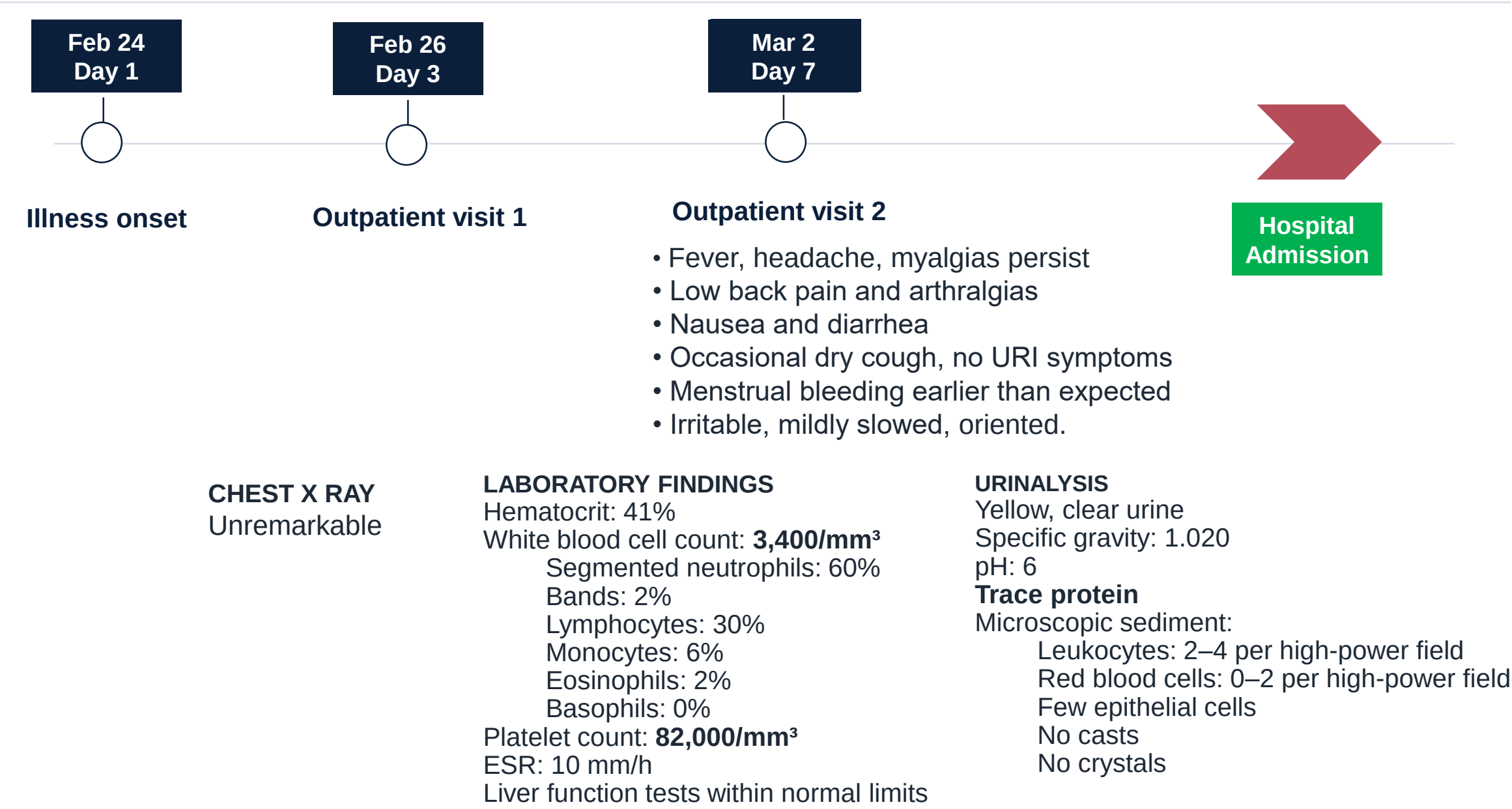
Outpatient visit 2

- Fever, headache, myalgias persist
- Low back pain and arthralgias
- Nausea and diarrhea
- Occasional dry cough, no URI symptoms
- Menstrual bleeding earlier than expected
- Irritable, mildly slowed, oriented.

PHYSICAL EXAMINATION

- Erythematous rash involving the face, neck, and upper trunk
- Conjunctival injection
- Bilateral periorbital edema
- Oropharyngeal enanthem characterized by:
 - increased vascular pattern of the soft palate
 - petechiae and microvesicles
- Petechiae on the inner aspect of both arms
- Small, non-tender cervical lymphadenopathy
- Respiratory examination unremarkable
- Remainder of the physical examination unremarkable

Initial Illness Timeline



Admission, Initial Management, and Etiologic Workup

March 2 - Admission

Initial differential

Dengue • Argentine hemorrhagic fever •
Chikungunya • Hantavirus infection •
Leptospirosis

Rapid dengue test

NS1 negative
IgM negative
IgG negative

Initial etiologic studies

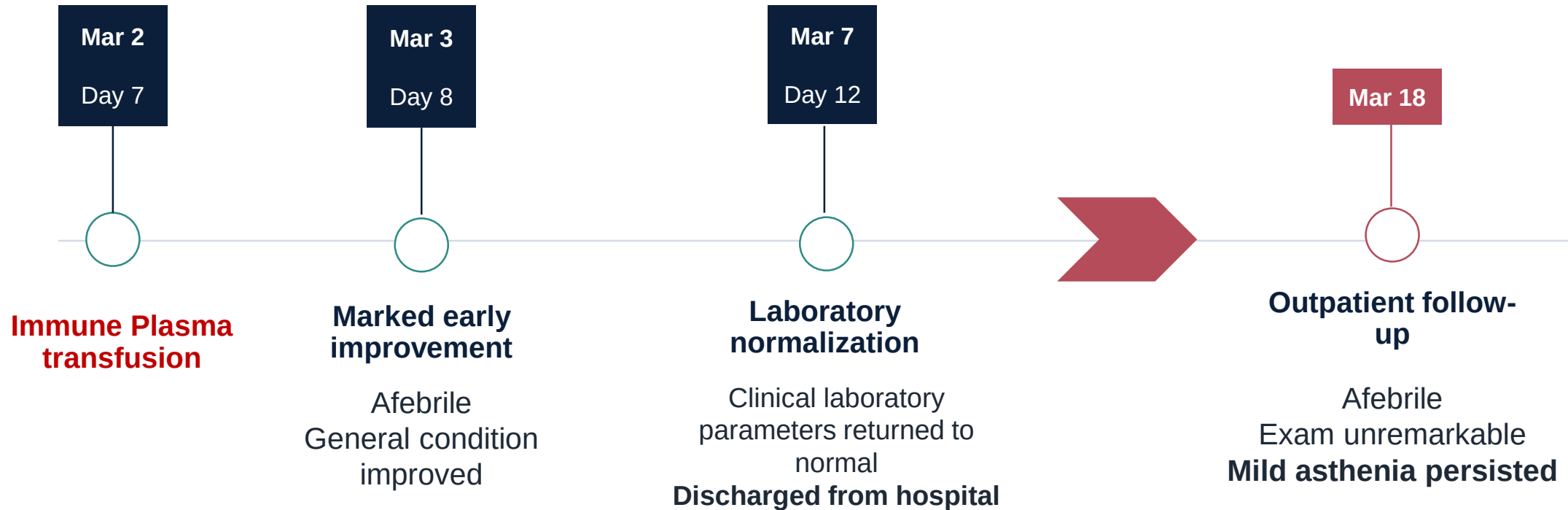
Junín virus real-time RT-PCR	Pending
Dengue PCR / IgM	Negative
Chikungunya PCR / IgM	Negative
Hantavirus PCR/ IgM	Negative
Leptospira PCR	Negative
Blood and urine cultures	Negative

Treatment decision

Immune plasma for AHF 3,500 TU/kg

Early virologic studies were unrevealing; however, the epidemiology and the bedside syndrome and evolution remained highly compatible with Argentine hemorrhagic fever.

Interval Follow-Up



Junín virus real-time RT-PCR: POSITIVE
Diagnosis: Argentine Hemorrhagic Fever

Readmission

April 2 - Readmission

- Three days of fever and headache
- Diplopia
- Nausea
- Moderate ataxia over the previous 24 hours
- Neurologic exam: bilateral sixth cranial nerve palsy

Cerebrospinal fluid

- Clear CSF
- Moderate pleocytosis
- Normal glucose
- Mildly elevated protein
- Direct bacteriologic examination: no organisms seen/cultures remained negative
- FilmArray meningitis/encephalitis panel: negative
- Junín virus real-time RT-PCR: negative

Neuroimaging

- Brain CT: no intracranial hemorrhage
- No mass effect
- No evident focal lesion
- Overall interpretation: within normal limits

Clinical impression: **AHF Late Neurologic Syndrome (LNS)**

Management

Symptomatic treatment only
Progressive improvement
Discharged April 12, asymptomatic and afebrile

Convalescent Serology and Final Diagnosis

May 2 – Outpatient follow-up

- Good general condition
- Second serum sample obtained

Junín virus ELISA IgG

- First sample (March 2): negative
- Second sample (May 2): **positive (1600)**

Final diagnosis: Argentine hemorrhagic fever complicated by Late Neurologic Syndrome

AHF - CLINICAL COURSE

- Acute febrile illness without upper respiratory tract involvement
- Early phase: nonspecific symptoms, with limited hemorrhagic and neurologic manifestations
- Progressive leukopenia and thrombocytopenia
- Without specific treatment, approximately 30% of patients progress to severe disease
- Severe disease may include major hemorrhagic and/or neurologic manifestations, shock, and secondary bacterial infections (mortality reaches up to 90%)
- Convalescence is prolonged, and full recovery may take 1–2 months
- Approximately 10% of patients treated with immune plasma may later develop Late Neurologic Syndrome (LNS) after a symptom-free period of 3–4 weeks

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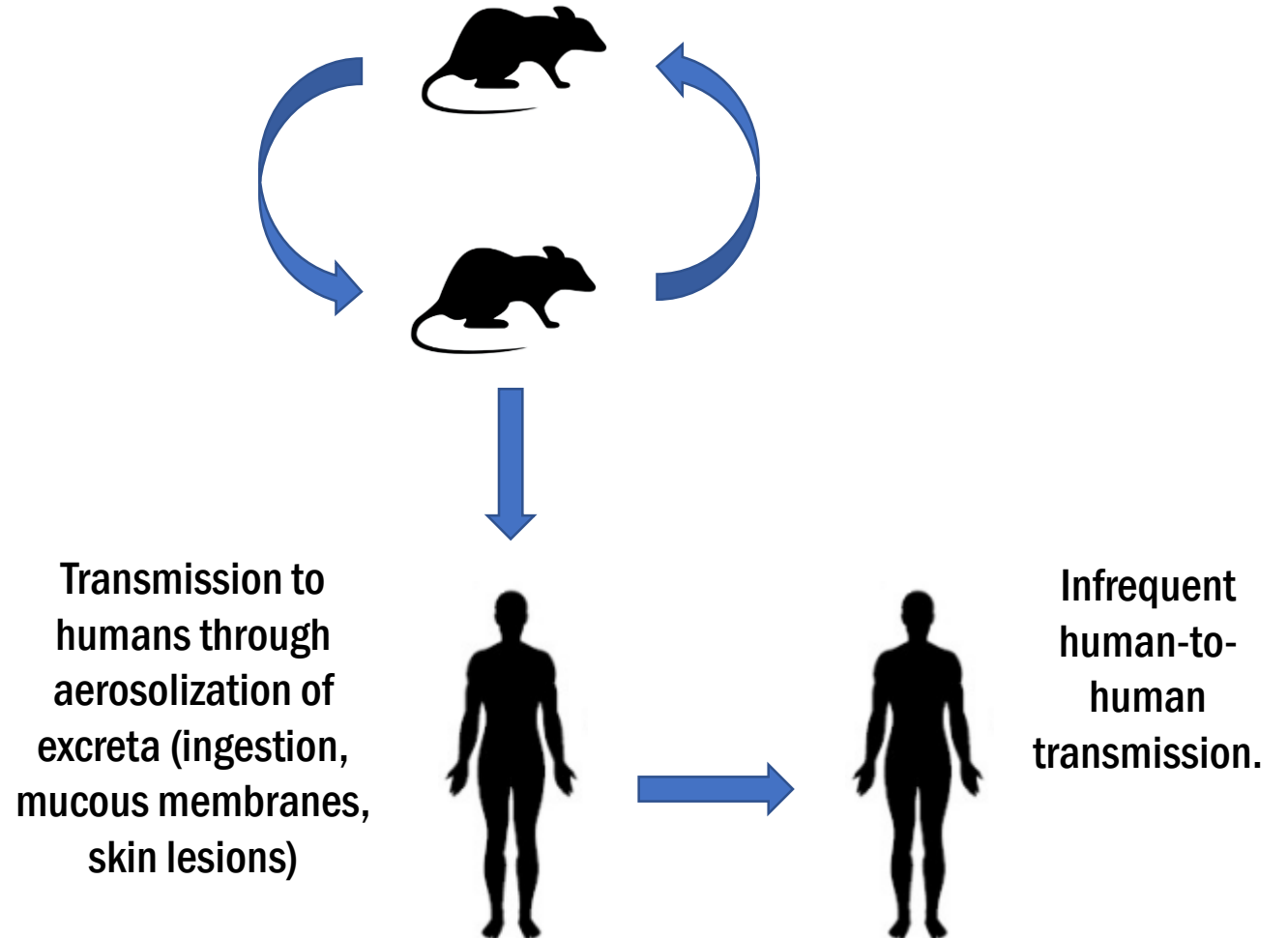
AHF – TRANSMISSION CYCLE

RESERVOIR

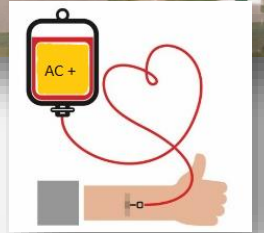
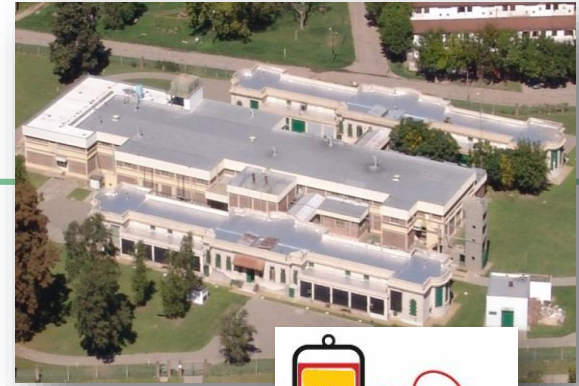
Calomys musculus



- Develop chronic infections
- Eliminates viruses through saliva, urine and fecal matter.



AHF- NATIONAL CONTROL PROGRAM



- 1958 ● Isolation of the Junín virus
- 1978 ● National Institute of Human Viral Diseases “Dr. Julio I. Maiztegui”
National Program for the Control of Argentine Hemorrhagic Fever
Epidemiological surveillance / Clinical diagnosis / Etiological diagnosis / **Specific treatment** /
Immune plasma banks / Health education / Human resources training / Research /
Environmental management and reservoir surveillance / AHF Vaccine Production / Population vaccination.
- 1990 ● Vaccine: Vaccine clinical trials – Phases I, II and III
- 2001 ● Vaccine: ANMAT enables the vaccine production plant at INEVH
- 2006 ● Vaccine: Bridge study between vaccine produced in the US and in Argentina
- 2007 ● **Vaccine Candid#1: Incorporation into the national immunization calendar**



AHF - ALGORITHM FOR CLINICAL SUSPICION

Patient with nonspecific febrile syndrome within the endemic area or with a visit to the same in the previous 3 weeks.

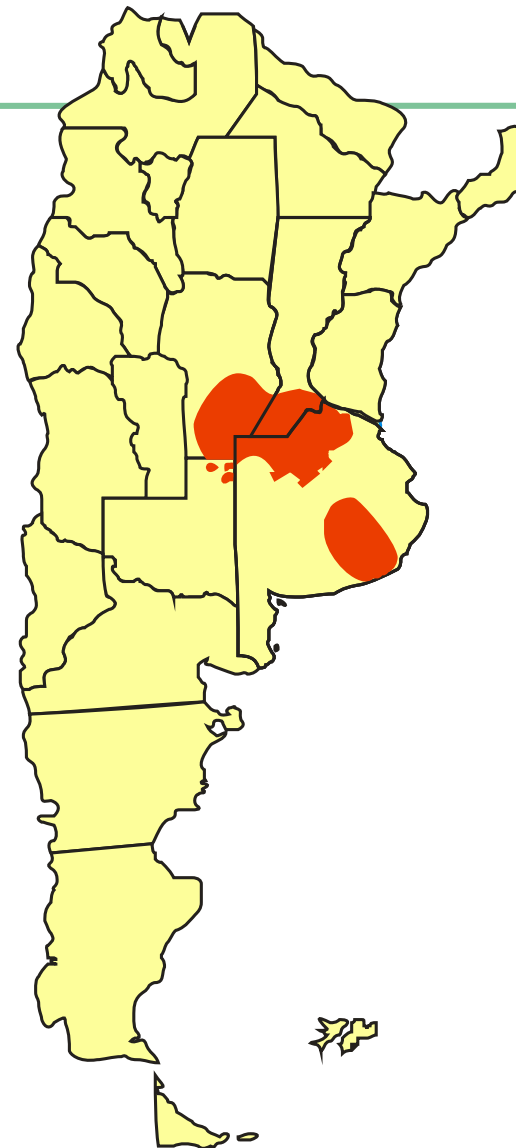
- Medical history and thorough physical examination
- Formulation of differential diagnoses
- Clinical laboratory

- White blood cells < 4,000 and Platelets < 100,000

SUSPECTED CASE



Complete Mandatory Notification Form.
Collect and send samples for diagnosis.
Treatment with immune plasma (3500 TU/kg)



Thank you!



39th Annual Meeting of the National Argentine Hemorrhagic Fever Control Program
Rosario, September 12, 2025