



# Crimean-Congo Hemorrhagic Fever in China

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# History

Epidemics of CCHF were first recorded in Bachu, Xinjiang in March-April 1964

11 cases with fever, hemorrhage, and with 10 death

The disease named “Xinjiang Hemorrhagic fever”



# History

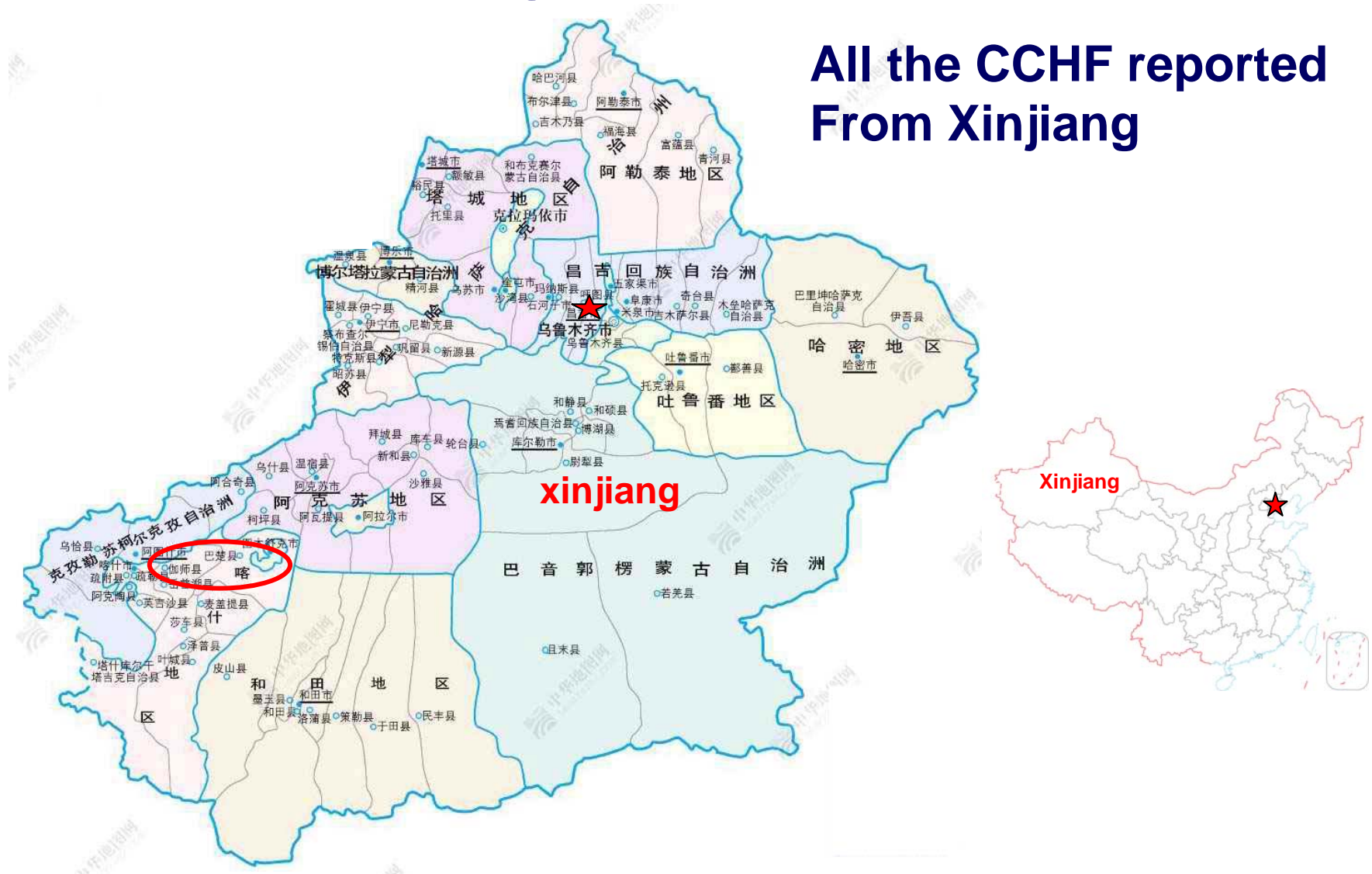
Viruses were isolated from patients' blood, liver, spleen, kidney and lymph node, but failure from brain and lung

Same viruses were isolated from ticks

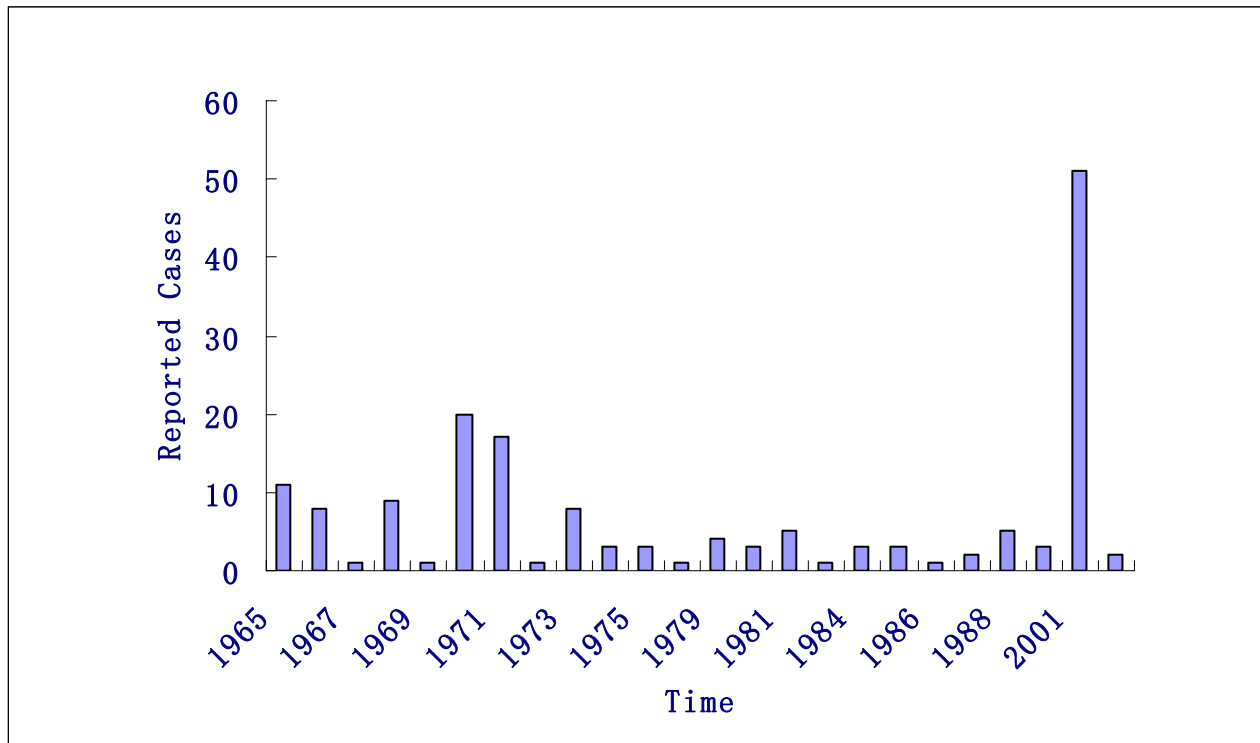
The similar disease could be traced back to 1959

# Epidemiology

All the CCHF reported  
From Xinjiang



# CCHF in Xinjiang



# Epidemiology

Most CCHF cases were sporadic in Xinjiang  
85% have no spatial and temporal relationship

## Outbreaks

- family

- work together

- nosocomial infection

# Epidemiology

CCHF occurs in Xinjiang from early spring to early summer annually, most cases appeared from April to May

Affects mostly males between the ages of 15 to 45 (76.4%)

Fatality rate is around 30%

# Occupational distribution

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Occupation	Case No	%
Meadow worker	69	49.4
Farmer	37	23.6
Medical worker	8	5.7
Student	5	3.6
Others	21	17.7

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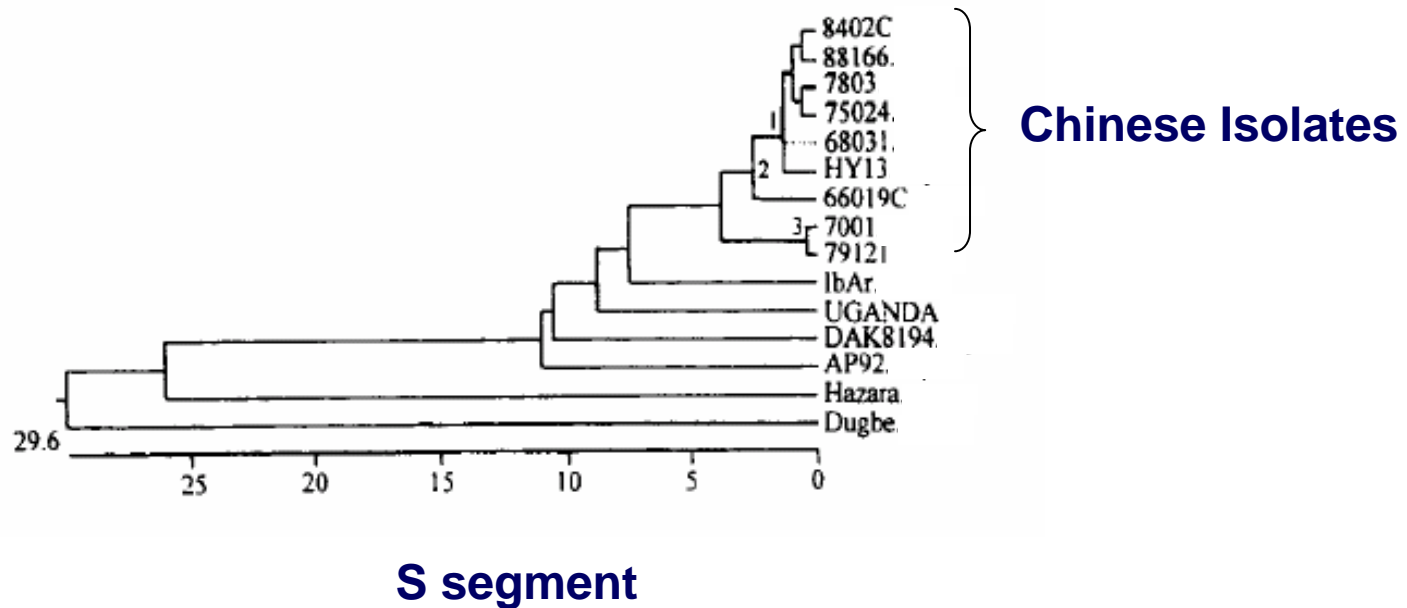
# Transmition

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	case No	%
Tick bite	23	38
Meadow works	29	48
Contact Patient	9	14

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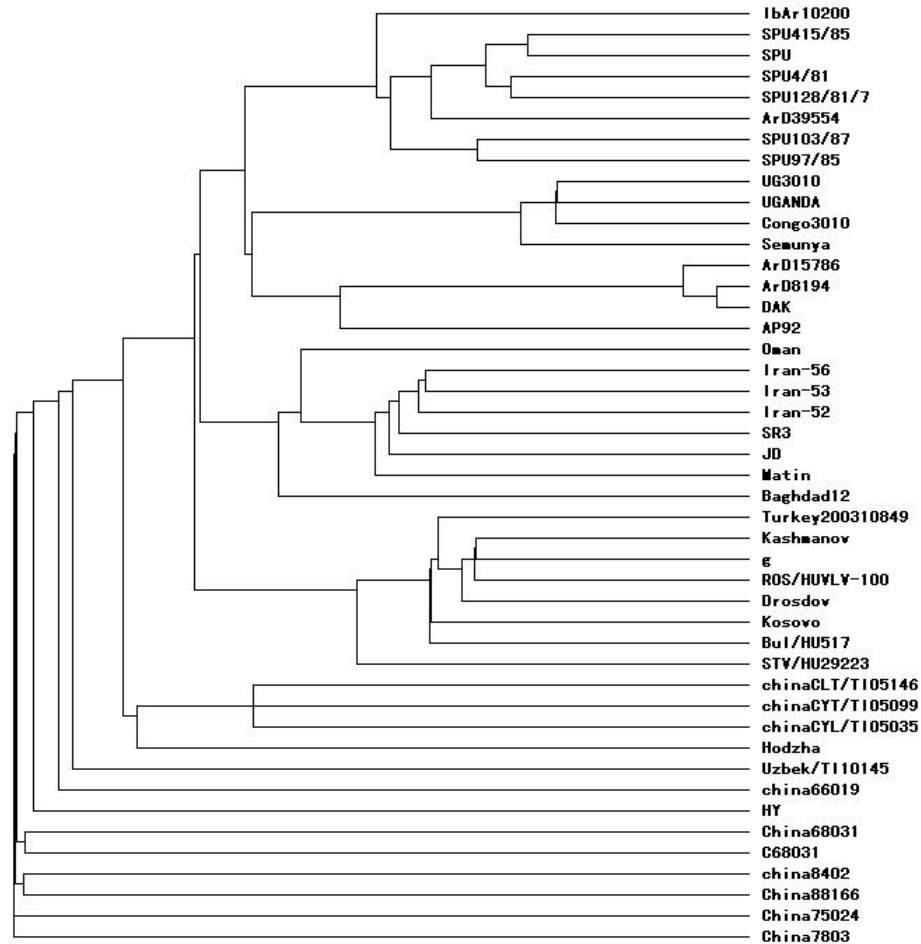
# Phylogenetic Analysis of CCHF Viruses



# Homology comparison

<b>Virus</b>	88166	7803	75024	7001	79121	8402	66019	68031	HY13	1bAr	Uganda	Dak8194	AP92	Hazara	Dugbe
88166		99.2	99.4	93.8	93.0	99.4	96.8	99.3	98.1	85.1	84.6	80.2	77.5	49.6	48.6
7803	99.0		99.5	93.8	93.0	99.0	96.8	99.3	98.2	85.2	84.6	79.8	77.2	49.8	48.5
75024	99.4	98.6		94.0	93.2	99.2	97.0	99.5	98.4	85.3	84.6	80.2	77.5	49.6	48.3
7001	97.9	97.1	97.5		99.0	93.5	92.8	94.0	93.4	84.8	83.7	79.3	76.9	50.7	48.2
79121	97.9	97.1	97.5	99.4		92.7	92.1	93.2	93.5	85.2	83.8	77.6	76.9	49.3	48.8
8402	99.2	98.3	98.8	97.3	97.3		96.7	99.0	97.9	84.7	84.3	80.0	77.5	49.3	48.1
66019	98.8	97.9	98.3	97.5	97.5	98.1		96.9	97.1	85.3	84.8	78.8	77.5	49.9	47.7
68031	99.4	98.6	99.0	97.5	97.5	98.3	98.3		98.5	85.1	84.5	80.3	77.4	49.7	48.2
HY13	99.6	98.8	99.2	97.7	97.7	99.0	98.6	99.6		85.9	84.5	78.9	77.6	49.8	48.8
1bAr	97.1	96.3	97.1	96.3	96.3	96.5	97.1	96.7	96.9		82.0	76.6	76.7	49.1	48.9
Uganda	96.3	95.4	95.9	95.0	95.0	95.9	96.3	95.9	96.1	95.2		77.7	78.3	51.6	49.0
Dak8194	94.4	93.6	94.0	93.8	93.8	93.8	94.4	94.0	94.2	94.0	93.4		77.6	50.4	48.0
AP92	91.9	91.1	91.7	91.1	91.1	91.3	91.9	91.5	91.7	91.3	91.1	92.3		51.4	48.5
Hazara	58.8	58.4	58.6	59.2	59.2	58.4	59.0	58.6	58.8	58.2	58.2	57.1	58.0		45.6
Dugbe	54.2	53.9	53.9	53.9	53.9	53.7	54.4	54.2	54.2	53.4	54.2	52.7	54.4	51.6	

# Phylogenetic Analysis of CCHF Virus





# Diagnosis

Clinical Diagnosis

Mac-ELISA

Indirect ELISA

IFA

RT-PCR



# Treatment

Supportive therapeutics

Convalescent sera

Ribavirin

Need well designed clinical trials to  
evaluate



# Vaccine

Suckling mice brain derived CCHF  
inactivated vaccine licenced in China



Thank You