

"A Baby from Haiti"

A disease simulation using GIDEON's diagnosis module.

A 16 month old child is brought to the United States following adoption in Haiti. One week after arriving, the child develops a prolonged illness characterized by fever, cough and respiratory distress. Physical examination reveals generalized lymphadenopathy and hepatosplenomegaly. A chest roentgenogram discloses pulmonary infiltrates, and a moderate lymphocytosis is present. What is the differential diagnosis in this case?

Clinical findings were entered into GIDEON:

... and the diagnosis result was:

The screenshot shows the GIDEON interface with the following clinical findings entered:

- The patient is an adult
- The patient is a child
- Less than two years old
- Severe (hospitalized, hemorrhagic fever, fatal, etc)
- Fever
- Illness is recurrent or >= 3 weeks (warning)
- Compromised host
- Jaundice
- GI and intraabdominal - disease or dysfunction
- Diarrhea
- Vomiting
- Hematemesis
- Abdominal pain
- Abdominal mass or cyst(s)
- Dysphagia
- Esophagitis
- Hepatomegaly
- Hepatic mass or cyst(s)
- Biliary disease
- Pancreatitis
- Rectal-Anal: inflammation or discomfort
- Blood in stools (hematochezia)
- Gastrointestinal obstruction
- Gastrointestinal perforation

The Clinical Summary shows: Dermatological - skin and soft tissue, Pneumonia or lung infiltrate, Cough, Hepatomegaly, Illness is recurrent or >= 3 weeks, Fever, Severe (hospitalized, hemorrhagic fever, fatal, etc), Less than two years old, Generalized lymphadenopathy, Lymphocytosis. Disease acquired in: Haiti. Onset of disease: 23-Sep-0. Illness First Appeared: 7 days after exposure began.

GIDEON Diagnosis Results
Based on the clinical findings you entered, here is GIDEON's diagnosis:

Disease	Probability
<input type="checkbox"/> Tuberculosis	87.6%
<input type="checkbox"/> Cytomegalovirus infection	11.7%
<input type="checkbox"/> Brucellosis	< 1%
<input type="checkbox"/> Toxoplasmosis	< 1%
<input type="checkbox"/> Q fever	< 1%
<input type="checkbox"/> Mycobacteriosis - systemic	< 1%
<input type="checkbox"/> Fungal infection - invasive	< 1%

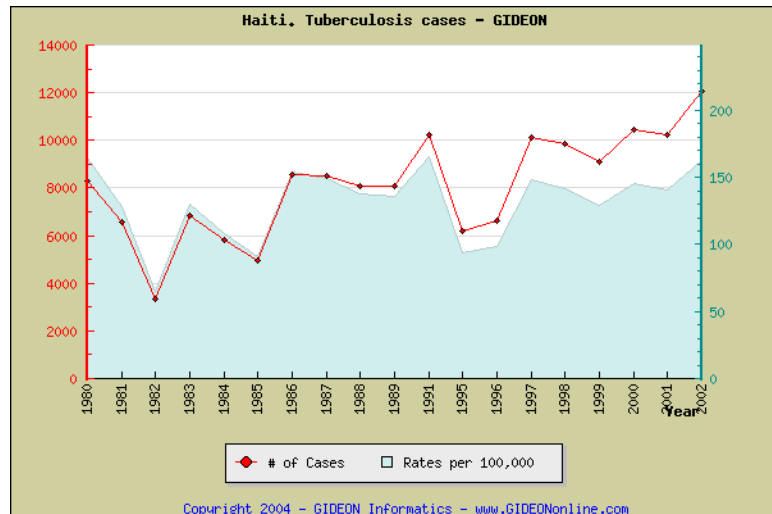
Total: 7 listed
Globe icon indicates note exists for Haiti

In addition to the top diagnosis of Tuberculosis, GIDEON provided the following additional information:

- Comparison of signs and symptoms for the differential diagnosis list
- A graph of the cases and disease rates of Tuberculosis in Haiti

Disease Comparison

Clinical Findings	Tuberculosis	Cytomegalovirus infection	Brucellosis	Q fever	Toxoplasmosis	Mycobacteriosis - systemic	Fungal infection - invasive
Cultures negative	-	+	-	+	+	-	-
Respiratory or pharyngeal acquisition	+	-	-	+	-	V	V
Pulmonary, thoracic, chest wall or cardiac	+	-	V	V	-	V	-
Compromised host	-	-	-	-	V	+	+
Headache	-	-	+	+	-	-	-
Neurological - headache, meningitis, etc	-	-	+	+	-	-	-
Ingestion	-	-	+	-	V	-	-
Dairy products	-	-	+	-	-	-	-
Back pain	-	-	+	-	-	-	-
Lymphadenopathy	-	V	-	-	+	-	-
Musculoskeletal - muscle, bone and joint	-	-	+	V	V	-	-
AIDS	-	-	-	-	V	+	-
Myalgia; or muscular mass or swelling	-	-	+	V	V	-	-
Cattle, sheep, goats, deer, swine - contact	-	-	V	V	-	-	-
Arthralgia	-	-	V	-	-	-	-
Focal lymphadenopathy - other region	-	-	-	-	V	-	-
Illness is recurrent or >= 3 weeks	V	-	V	-	-	-	-
Leukemia or							



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