

## "The Delirious Photographer"

A disease simulation using GIDEON's diagnosis module.

A 55 year old American photographer returned home after a six-week trip to the game parks of Tanzania. Four weeks after return, he developed headache, myalgia, arthralgia, weight loss and intermittent fever. The patient is noticeably confused and distracted, and physical examination reveals hepatosplenomegaly and lymphadenopathy in the supraclavicular and cervical regions. The hemogram is normal, but the cerebrospinal fluid contains 20 lymphocytes per mm<sup>3</sup>. What is your diagnosis?

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
- Severe (hospitalized, hemorrhagic fever, fatal, etc)
- Fever
- Illness is recurrent or >= 3 weeks (warning)
- Compromised host
- Jaundice
- GI and intraabdominal - disease or dysfunction
- Pulmonary, thoracic, chest wall or cardiac
- Dermatological - skin and soft tissue
- Lymphadenopathy
- Splenomegaly or splenic lesion(s)
- Neurological - headache, meningitis, etc
- Ophthalmological
- Ears, nose, throat and oral cavity
- Musculoskeletal - muscle, bone and joint
- Genitourinary
- Laboratory tests
  - Hematological
    - Neutrophilia
    - Neutropenia
    - Lymphocytosis
    - Thrombocytopenia
    - Anemia

The Clinical Summary shows:
 

- + The patient is an adult
- + Severe (hospitalized, hemorrhagic fever, fatal, etc)
- + Fever
- + Illness present >3 weeks to 6 weeks
- + Hepatomegaly
- Pulmonary, thoracic, chest wall or cardiac
- + Generalized lymphadenopathy
- + Splenomegaly or splenic lesion(s)
- + Headache
- + Encephalitis or encephalopathy

 Disease acquired in: Tanzania

The screenshot shows the GIDEON Diagnosis Results interface with the following table:

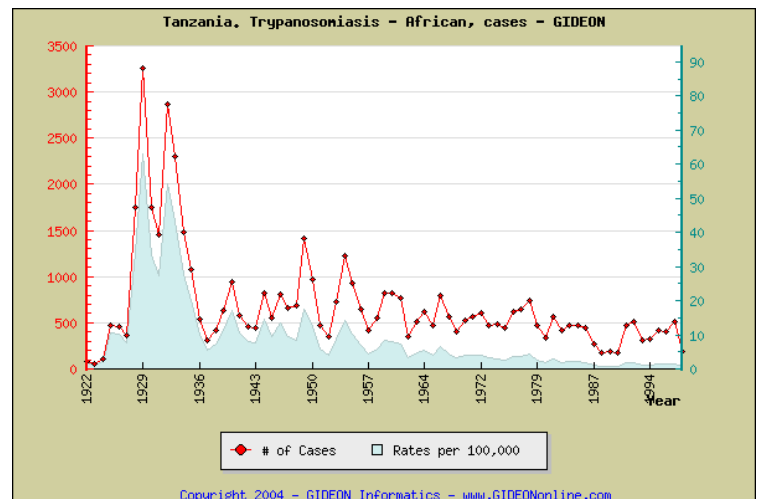
| Disease  | Probability |
|--|-------------|
| <input type="checkbox"/> Trypanosomiasis - African       | 97.9%       |
| <input type="checkbox"/> HIV infection - initial illness | 2.1%        |
| <input type="checkbox"/> Brucellosis                     | < 1%        |
| <input type="checkbox"/> Mononucleosis - infectious      | < 1%        |
| <input type="checkbox"/> AIDS                            | < 1%        |
| <input type="checkbox"/> Q fever                         | < 1%        |
| <input type="checkbox"/> Fungal infection - invasive     | < 1%        |

Total: 7 listed

indicates note exists for Tanzania

In addition to the diagnosis of Trypanosomiasis - African, GIDEON provided the following information specific to Tanzania:

1. Trypanosomiasis due to *T. brucei gambiense* entered Tanzania from Zaire in approximately 1902; *T.b. rhodesiense* from Mozambique in 1910.
2. Highest prevalence occurs in Arusha and Kigoma.
3. An estimated 1,5 million persons lived in endemic zones during the 1980's.
4. An American tourist developed trypanosomiasis while in Tanzania in 1981.
5. In 2001, 10 cases were reported among tourists returning from Tanzania: including 3 in the Netherlands, 2 in Italy, and one each in Sweden, Belgium, South Africa, The United States and the United Kingdom. All had visited Tarangire and Serengeti National Parks.
6. The local vectors are *Glossina morsitans*, *G. pallidipes* and *G. swynnertoni*.



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