# Oncologic: A Knowledge-Building Game for Exploring the Diagnosis of Cancer

*by*

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## Overview

This game is played by a group of three or more people. Several "new doctors" are guided by another player who assumes the role of the Emperor of All Maladies (EM) to efficiently and collaboratively gather important patient information. The process of gathering information should lead players to successful cancer diagnoses. Players utilize their intellect, as well as the information obtained from other healthcare professionals that the EM provides, to understand the patient, their medical history, current health status, and symptoms.

Throughout the game, players can call upon the nursing staff, which typically acts as the initial source of vital information when first interacting with the patient. The nursing staff (composed of "in-game" colleagues, i.e., not actual players but rather fictional sources of information that the EM shares) have ten unique pieces of information or clues that they can share (Tier 1 information). Players discover this information by rolling a 20-sided die, which determines how many clues the EM reveals. In addition to the nursing staff, players interact with other in-game colleagues from other departments, such as radiology and pathology, who provide more specific information (Tier 2 information).

## Roles, Rolls, and Rules

The Emperor of All Maladies (EM) is analogous to a Dungeon Master (DM) in the *Dungeons and Dragons* role-playing game. The principal role of the EM is to read the appropriate information clues to the players. The information is displayed on a card, but the EM has some flexibility to make the game easier or harder by choosing which information from each respective list is to be shared. Just as in real-world scenarios, there are many different paths medical professionals take to learn about patients and the nuances in their health. There are some rules that must be followed, but outside of that, the EM may decide how each round progresses.

The remaining students in the group assume the role of medical oncologists and make choices to uncover information regarding the patient, which they then transcribe onto their player card (included below) as the game progresses. Information is gathered by rolling the D20 die, and depending on the progression of the game, information collected by players is sourced from either the nursing, radiology, or pathology staff. The amount of information revealed is dependent on the value of the D20 roll (see Roll Values below). On a player's turn, the player must choose to either gather information from one of these three medical fields or attempt to diagnose the cancer. On the first turn, a player must consult with the nursing staff, but can later progress to additional medical fields (pathology or radiology) for information, making a D20 roll after selecting the medical field they want to consult for information. Players collect information with the goal of successfully diagnosing the cancer type and its location(s).

## Roll Values

Roll 1: No information (failure to communicate).

Roll 2–7: One clue.

Roll 8–13: Two clues.

Roll 14–19: Three clues.

Roll 20: Four clues *and* 1 "key" clue.

## Sources of Information

- *Nursing Staff:* Nursing staff includes nurses, patient care techs or nursing assistants, nurse educators, and infusion staff. These professionals provide Tier 1 information. The nursing staff has a maximum of ten Tier 1 clues to share. Once playes have collected five of the ten available clues, they can access Tier 2 information from pathology and radiology.
- *Pathology:* The field of pathology and related staff includes medical technologists, cytotechnologists, medical technicians, and pathologists. Pathologists often coordinate closely with surgeons to analyze the specimens once the surgeons have performed a biopsy. Pathology has ten Tier 2 clues to share.
- *Radiology:* The field of radiology and related staff includes x-ray techs, radiology techs, CT techs, ultrasound techs, diagnostic medical sonographers, and radiologists. This field conducts scans that provide detailed information on the internal workings of the body by revealing differences in density, etc. Types of scans include CT scan, X-Ray, MRI, fMRI, and ultrasound. Radiology has ten Tier 2 clues to share.

Once a team has gathered five of ten available Tier 1 (nursing) and five of the twenty Tier 2 (pathology and radiology) clues, players can attempt a diagnosis.

## Key Information

There are additional key pieces of information that provide final clues towards a successful diagnosis. When a "20" is rolled, the EM notes that a key clue has been uncovered, but does not reveal this clue until the diagnosis phase. Key clues are used to help confirm or deny suspicions about the cancer and aid in diagnosis. It is not necessary to uncover a key clue for successful diagnosis.

## Diagnosis

Once a group has successfully determined the type, number of malignant tumors, and their location (typically confirmed by key clues), then the round is over and the group has diagnosed the patient's cancer.

## Player Card

*Player's name:* _____

Fill in information from the EM in the spaces below.

*Nursing (10 total clues)*

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*Pathology (10 total clues)*

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*Radiology (10 total clues)*

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| *Nursing Information* | *Pathology Information* | *Radiology Information* |
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*Key Information (4 total clues)*

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*Diagnosis:*

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