What is Cancer Staging

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AJCC
American Joint Committee on Cancer
Validating science. Improving patient care.
Cancer Staging

• Why it is needed
• How is a cancer’s stage determined
• What does it mean
• How is it used
Why Stage is Needed

• Cancer usually needs a team of physicians to provide care
  – Primary care physician (family physician)
  – Radiologist (reports on x-rays)
  – Pathologist (reports on tissue removed from your body)
  – Surgeon (removes the cancer through surgery)
  – Medical Oncologist (treats with cancer drugs)
  – Radiation Oncologist (treats with radiation)

• Common language for accurate physician communication
• Cancer staging
  – Describes amount of cancer in patient’s body
  – Describes where the cancer has spread to within the body
  – Can include other information about the cancer
Determining the Stage

• Stage is based on where in the body the cancer started – not where it spread to
  – Example: breast, colon, lung

• AJCC Cancer Staging Manual 7th edition
  – Presents rules for staging
  – Individual chapters by parts of the body
  – Written by leading experts and used worldwide
  – Based on national cancer data that is continually collected from hospitals and analyzed
AJCC stage includes:

• **T** – main tumor in the body, where it started

• **N** – spread of cancer to lymph nodes, metastasis to lymph nodes

• **M** – distant metastasis, or the spread of cancer to other parts of the body, either through the lymph nodes or through the blood
• Each T, N, and M categories are assigned numbers

• Higher numbers mean more cancer involvement than the lower numbers

• T – category is numbered 0 through 4

• N – category is numbered 0 through 3

• M – category is numbered 0 through 1
Calculation of T, N, M

- The physician chooses the T, N, and M that best describes the patient’s cancer
- These are written together to describe the patient’s cancer
- There are many possible calculations of T, N, M
  - For example:
    T1 N0 M0
    T2 N1 M0
    T4 N2 M1
• The calculations of T, N, and M are put into a stage category, simply called stage

• Four main stage categories
  – I, II, III, IV
  – May be broken down further: IA, IB

• Stage
  – There are many possible calculations of the numbered categories for T, N, and M
  – Organizes calculations into four stage categories
Different criteria for each stage, and also different by part of the body where the cancer started
Meaning of Stage

• Why classify TNM into a stage
  – Gather together patients that will have the same type of treatment
  – Gather together patients that will have the same outcome or chance of survival

• What does the stage number mean
  – Higher numbers mean it has spread in the body
  – Higher numbers mean it is more aggressive
How Staging is Used

• Used to select treatment
  – Guidelines are available to help physicians choose the best treatments based on the stage

• Used to predict outcome
  – Information is gathered on many patients based on stage
  – Chance of recurrence of cancer
  – Patient’s probability of surviving over a number of years (1, 5, 10 years)
Staging Summary

- A language for physicians
- Provides information to the patient about their prognosis
TNM Stage Process

Determine timeframe for stage assignment

- At time of diagnostic workup - clinical
- After surgical resection - pathologic

Assign categories:
- Primary tumor
- Regional nodes
- Distant metastasis

Assign stage group that contains those categories

- 0
- I - IV
TNM Staging: 
*The Common Language of Cancer*

AJCC Web Site:  http://cancerstaging.org
Thank you

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