

Calculation of Tissue Sensitivity
A Chest X-Ray Is Equal to 10 Days of Natural Radiation.
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Based on the lecture notes, fill in the tissues under their proper column to indicate their radiation sensitivity.

EFFECTIVE Dose will be quantifying different tissue's susceptibility in the absorption of radiation and biological damage.

> **Units will be in rads/gys**

<u>0.01</u>	<u>0.05</u>	<u>0.12</u>	<u>0.20</u>

Calculate

1. During an extended OR case, a patient received the following doses: 15 mrad to their gonads, 10 mrad to their lung, and 5 rad to breast. Calculate the EfD.

2. Due to major complications during an extended hip pinning, the patient had multiple surgeries to fix the problem. The patient received 5 grays to the skin area, 6 grays to the bone marrow, 15 grays to the gonads, and 6 grays to the bladder. Calculate the EfD.

3. During a hospital stay, a patient received 12 chest exams that exposed the lungs to a total of 8 mrad and 8 mrad to the thyroid.
 - a. Calculate the specific tissue's sensitivity.

 - b. Both areas had the same amount of radiation exposure to the tissue, why were the outcomes different? Explain based on the Law of B and G.