Organolead halide perovskites are attracting considerable interest due to their exceptional optoelectronic properties, such as high charge carrier mobilities, high exciton diffusion length, high extinction coefficients, and broad-band absorption. These interesting properties have enabled their application in high performance hybrid photovoltaic devices. The high Z value of their constituents also makes these materials efficient for absorbing X-rays. Here we will present on the efficient use of hybrid solar cells based on organolead perovskite materials as X-ray detectors. Hybrid solar cells based on CH$_3$NH$_3$PbI$_3$ were fabricated using facile processing techniques on patterned indium tin oxide coated glass substrates. The solar cells typically had a planar configuration of ITO/CH$_3$NH$_3$PbI$_3$/P3HT/Ag. High sensitivity for X-rays due to high Z value, larger carrier mobility, and better charge collection was observed. Detecting X-rays with energies relevant to medical oncology applications opens up the potential for diagnostic imaging applications.