Normal Lungs X Ray

== Classification == f98a23d5cc == Types == f98a23d5cc

Pulmonary contusion Unlike a pulmonary laceration, another type of lung injury, a pulmonary contusion does not involve a cut or tear of the lung tissue. The excess fluid interferes with gas exchange, potentially leading to inadequate oxygen levels (hypoxia). As a result of damage to capillaries, blood and other fluids accumulate in the lung tissue. lungs because a shock wave travels through the chest and hits the curved back of the chest wall; this reflects the energy onto the back of the lungs, A pulmonary contusion, also known as a lung contusion, is a bruise of the lung, caused by chest trauma f98a23d5cc

Pulmonary hemorrhage When evident clinically, the condition is usually massive. The onset of pulmonary hemorrhage is characterized by a cough productive of blood (hemoptysis) and worsening of oxygenation leading to cyanosis. chest X-ray showing alveolar infiltrates in the lungs, which are areas of air space in the lungs that are opacified and of higher density that normal, usually Pulmonary hemorrhage (or pulmonary haemorrhage) is an acute bleeding from the lung, from the upper respiratory tract and the trachea, and the pulmonary alveoli. Treatment should be immediate and should include tracheal suction, oxygen, positive pressure ventilation, and correction of underlying abnormalities such as disorders of coagulation. A blood transfusion may be necessary f98a23d5cc

Obstructive lung disease It is generally characterized by inflamed and easily collapsible airways, obstruction to airflow, problems exhaling, and frequent medical clinic visits and hospitalizations. the lungs following full expiration, is often increased in COPD, as is the total lung capacity, while the vital capacity remains relatively normal. Types of obstructive lung disease include asthma, bronchiectasis, bronchitis and chronic obstructive pulmonary disease (COPD). The Obstructive lung disease is a category of respiratory disease characterized by airway obstruction. Although COPD shares similar characteristics with all other obstructive lung diseases, such as the signs of coughing and wheezing, they are distinct conditions in terms of disease onset, frequency of symptoms, and reversibility of airway obstruction. Many obstructive diseases of the lung result from narrowing (obstruction) of the smaller bronchi and larger bronchioles, often because of excessive contraction of the smooth muscle itself. Cystic fibrosis is also sometimes included in obstructive pulmonary disease f98a23d5cc

In the last... f98a23d5cc Ground-glass opacity is most often used to describe findings in high-resolution CT imaging of the thorax, although it is also used when describing chest radiographs. In CT, the term refers to one or multiple areas of increased attenuation (density) without... f98a23d5cc Humans have two lungs, a right lung and a left lung. They are situated within the thoracic cavity of the chest. The right lung is bigger than the left, and the left lung shares space in the chest with the heart. The lungs together weigh approximately 1.3 kilograms (2.9 lb), and the right is heavier. The lungs are part of the... f98a23d5cc A pulmonary contusion is usually caused directly by blunt trauma but can also result from explosion injuries or a shock wave associated with penetrating trauma. With the use of explosives during World Wars I and II, pulmonary contusion resulting from blasts gained recognition. In the 1960s its occurrence in civilians began to receive wider recognition, in which cases it is usually caused by traffic accidents. The use of seat belts and airbags reduces the risk to vehicle occupants. f98a23d5cc == Causes == f98a23d5cc == Equipment == f98a23d5cc

Lung In mammals and most other tetrapods, two lungs are located The lungs are the primary organs of the respiratory system in many animals, including humans. Their function in the respiratory system is to extract oxygen from the atmosphere and transfer it into the bloodstream, and to release carbon dioxide from the bloodstream into the atmosphere, in a process of gas exchange. In humans, the primary muscle that drives breathing is the diaphragm. In early tetrapods, air was driven into the lungs by the pharyngeal muscles via buccal pumping, a mechanism still seen in amphibians. The lungs also provide airflow that makes vocalisation including speech possible. Mammals, reptiles and birds use their musculoskeletal systems to support and foster breathing. Respiration is driven by different muscular systems in different species. In mammals and most other tetrapods, two lungs are located near the backbone on either side of the heart. The lungs are the primary organs of the respiratory system in many animals, including humans f98a23d5cc

Eosinophilic pneumonia Eosinophilic pneumonia is diagnosed by a combination of characteristic symptoms, findings on a physical examination by a health provider, and the results of blood tests and X-rays. The most common symptoms include cough, fever, difficulty breathing, and sweating at night. Prognosis is excellent once most eosinophilic pneumonia is recognized and treatment with corticosteroids is begun. eosinophils and a chest X-ray or computed tomography identifies abnormalities in the lungs, when a biopsy identifies increased eosinophils in lung tissue, or when Eosinophilic pneumonia, sometimes known as Marquette’s Disease is a disease in which an eosinophil, a type of white blood cell, accumulates in the lungs. Several different kinds of eosinophilic pneumonia exist and can occur in any age group. These cells cause disruption of the normal air spaces (alveoli) where oxygen is extracted from the atmosphere f98a23d5cc

Projectional radiography Plain radiography can also refer to radiography without a radiocontrast agent or radiography that generates single static images, as contrasted to fluoroscopy, which are technically also projectional. less-penetrating X-ray beam is used. The image acquisition is generally performed by radiographers, and the images are often examined by radiologists. Both the procedure and any resultant images are often simply called 'X-ray'. Plain radiography or roentgenography generally refers to projectional radiography (without the use of more advanced techniques such as computed tomography that can generate 3D-images). Tissues commonly imaged include the lungs and heart shadow in a chest X-ray, the air pattern of the bowel in abdominal X-rays, the Projectional radiography, also known as conventional radiography, is a form of radiography and medical imaging that produces two-dimensional images by X-ray radiation. Projectional radiography is not the same as a radiographic projection, which refers specifically to the direction of the X-ray beam and patient positioning during the imaging process f98a23d5cc

Infant prematurity is the factor most commonly associated with pulmonary hemorrhage. Other associated factors are those that predisposed to perinatal asphyxia or bleeding disorders, including toxemia of pregnancy, maternal cocaine use, erythroblastosis fetalis, breech delivery, hypothermia, infection (like pulmonary tuberculosis), Infant respiratory distress syndrome (IRDS), administration of exogenous surfactants (in some studies) and extracorporeal membrane oxygenation (ECMO). f98a23d5cc X-rays can penetrate many solid substances such as construction materials and living tissue, so X-ray radiography is widely used in medical diagnostics (e.g., checking for broken bones) and materials science (e.g., identification of some chemical elements and detecting weak points in construction materials). However X-rays are ionizing radiation and exposure can be hazardous to health, causing DNA damage, cancer and, at higher intensities, burns and radiation sickness. Their generation and use is strictly controlled by public health authorities. f98a23d5cc

Ground-glass opacity It is typically defined as an area of hazy opacification (x-ray) or increased attenuation (CT) due to air displacement by fluid, airway collapse, fibrosis, or a neoplastic process. On both x-ray and CT, this appears more grey or hazy as opposed to the normally dark-appearing lungs. Although it can sometimes be seen in normal lungs, common pathologic causes include infections, interstitial lung disease, and pulmonary edema. on chest x-ray (radiograph) or computed tomography (CT) imaging of the lungs. When a substance other than air fills an area of the lung it increases that area's density. It is typically defined as an area of hazy opacification (x-ray) or increased Ground-glass opacity (GGO) is a finding seen on chest x-ray (radiograph) or computed tomography (CT) imaging of the lungs f98a23d5cc

Diagnosis is made by studying the cause of the injury, physical examination and chest radiography. Typical signs and symptoms include direct effects of the physical trauma, such as chest pain and coughing up blood, as well as signs that the body is not receiving enough oxygen,... f98a23d5cc == Medical uses == f98a23d5cc In both CT and chest radiographs, normal lungs appear dark due to the relative lower density of air compared to the surrounding tissues. When air is replaced by another substance (e.g. fluid or fibrosis), the density of the area increases, causing the tissue to appear lighter or more grey. f98a23d5cc == Definition == f98a23d5cc X-rays were discovered in 1895 by the German scientist Wilhelm Conrad Röntgen, who named it X-radiation to signify an unknown type of radiation. f98a23d5cc

Phase-contrast X-ray imaging However, in phase contrast X-ray imaging, the beam's phase shift caused by the sample is not measured directly, but is transformed into variations in intensity, which then can be recorded by the detector. Standard X-ray imaging techniques like radiography or computed tomography (CT) rely on a decrease of the X-ray beam's intensity (attenuation) when traversing the sample, which can be measured directly with the assistance of an X-ray detector. Phase-contrast X-ray imaging or phase-sensitive X-ray imaging is a general term for different technical methods that use information concerning changes Phase-contrast X-ray imaging or phase-sensitive X-ray imaging is a general term for different technical methods that use information concerning changes in the phase of an X-ray beam that passes through an object in order to create its images f98a23d5cc

Eosinophilic pneumonia is divided into different categories depending upon whether its cause can be determined or not. Known causes include certain medications or environmental triggers, parasitic infections, and cancer. Eosinophilic pneumonia can also occur when the immune system attacks the lungs, a disease called eosinophilic granulomatosis with polyangiitis. When a cause cannot be found, the eosinophilic pneumonia is termed "idiopathic... f98a23d5cc

Chest radiograph The main regions where a chest X-ray may A chest radiograph, chest X-ray (CXR), or chest film is a projection radiograph of the chest used to diagnose conditions affecting the chest, its contents, and nearby structures. Chest radiographs are the most common film taken in medicine. lungs and other tissue structures, x-ray of the chest is not necessary as it will not alter patient management f98a23d5cc

X-ray Roughly, X-rays have a wavelength ranging from 10 nanometers to 10 picometers, corresponding to frequencies in the range of 30 petahertz to 30 exahertz (3×1016 Hz to 3×1019 Hz) and photon energies in the range of 100 eV to 100 keV, respectively. X-ray is a form of high-energy electromagnetic radiation with a wavelength shorter than those of ultraviolet rays and longer than those of gamma rays An X-ray is a form of high-energy electromagnetic radiation with a wavelength shorter than those of ultraviolet rays and longer than those of gamma rays f98a23d5cc

Like all methods of radiography, chest radiography employs ionizing radiation in the form of X-rays to generate images of the chest. The mean radiation dose to an adult from a chest radiograph is around 0.02 mSv (2 mrem) for a front view (PA, or posteroanterior) and 0.08 mSv (8 mrem) for a side view (LL, or latero-lateral). Together, this corresponds to a background radiation equivalent time of about 10 days. f98a23d5cc In addition to producing projection images, phase contrast X-ray imaging, like conventional transmission, can be combined with tomographic techniques to obtain the 3D distribution of the real part of the refractive index of the sample. When applied to samples that consist of atoms with low atomic number Z, phase contrast X-ray imaging is more sensitive to density variations in the sample than conventional transmission-based X-ray imaging. This leads to images with improved soft tissue contrast. f98a23d5cc == History == f98a23d5cc