Non-Ossifying Fibroma

What is a non-ossifying fibroma?
A non-ossifying Fibroma (NOF) is one of the most common benign bone tumors found in 30 to 40% of children between 8 to 20 years of age. They are non-cancerous and do not spread to other areas of the body. A NOF is a result from failure of the bone to properly close at its outer shell. They tend to persist or increase in size as the child grows but decrease in size or close once growth ends.

Where do non-ossifying fibromas commonly occur?
Non-ossifying fibromas commonly occur in the flared end of thighbone (femur) or shinbones but can also occur in the bones of the upper arm or lower leg.

What are the symptoms of a non-ossifying fibroma?
- Well-defined border
- Clear lesion located on the outer portion of the bone
- Near the ends of bone

How is a non-ossifying fibroma diagnosed?
- Usually discovered as an incidental finding after a child has a x-ray for other reasons
- If there was pain before the injury that seems to arise from the lesion, the diagnosis of NOF is unlikely

What is the treatment?
The most common complication of a NOF is a fracture to the bone from increased stress related to injury or lesions that occupy more than 50% of the bones diameter.

If there is a fracture, immobilization in a cast is the treatment of choice with close observation by an Orthopaedic doctor. These fractures heal well with a normal amount of callous but the NOF may or may not resolve. Surgery is recommended for those patients who do not properly heal with a cast, or are likely to re-break the bone again if the lesion is large.

Treatment options
Non-surgical: Most lesions tend to heal spontaneously by being replaced with normal bone as the child becomes skeletally mature.

Surgery: A NOF in a structurally compromising location may need surgery including scraping the inside of the bone (curettage). The hole left following this may require donor bone or a bone graft substitute to fill the defect.