

原文題目(出處)：	Tetracycline-guided debridement and cone beam computed tomography for the treatment of bisphosphonate-related osteonecrosis of the jaw: A technical Note. J Oral Maxillofac Surg 2008;66:2646-53.
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內文：

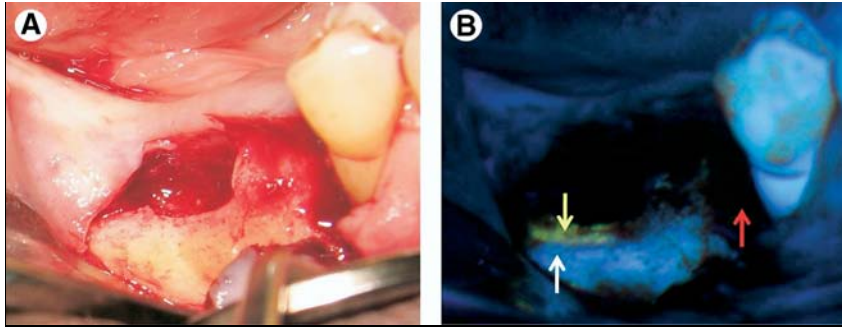
- Bisphosphonates are medications used to treat
 1. Osteoporosis
 2. hypercalcemia associated with cancer (metastatic breast cancer, multiple myeloma)
 3. prevention of skeletal complications (bone pain, pathologic fractures, spinal cord compression, and hypercalcemia of malignancy)
 4. Paget's disease
 5. zolendronic provides a chemotherapeutic effect by inducing apoptosis of myeloma and breast cancer cells and by exhibiting angiogenesis thereby depriving the tumor of a blood supply
 - cancer therapy :more than 2 million people
 - oral bisphosphonates : 73% of 6.3 million visits for osteoporosis
- Bisphosphonate-related osteonecrosis of the jaws(BRONJ)
 1. Avascular condition of bone
 2. Exposed bone or unusually delayed healing
 3. Most common presenting symptom of ONJ is pain
 4. 6 to 8 weeks after dental surgery
 5. clinical findings : mobile teeth, soft tissue inflammation, neurosensory changes of the lip, foul-tasting discharge
 6. X-ray: osteolysis, osteosclerosis, widening of the periodontal ligament, and persisting alveolar bone sockets
 7. The overall incidence (or prevalence) of BRONJ associated with Intravenously : less than 1% to 11%
- Technique
 1. diagnosed with ONJ based on the parameters of exposed bone, draining fistulas, and and/or neurosensory
 2. 10 patients → 7 mandible / 3 maxilla
→ 5 oral bisphosphonates / 5 intravenous bisphosphonates
 3. panoramic radiography, cone beam computed tomography (CBCT)
→to identify bony sequestrum and osteolysis
 4. Followed by the administration of tetracycline 250 mg 4 times a day for 3 to 7 days
 5. debridement of bone based on Wood's lamp examination.(appeared dark were debrided)

6. Local advancement flaps→close areas of exposed bone
 7. 7 days of postoperative antibiotics consisting of either Augmentin or Clindamycin
- Result
 1. followed for a minimum of 8 weeks
 2. all were asymptomatic and 9 without exposed bone
 3. 1 patient improvement of the paresthesia 6 months postoperatively.
 4. 1 patient remained on chemotherapy and had complete resolution of the pain with complete healing by 3 months.
 5. 4 of the patients CTX values < 150 pg/mL, representing reduced osteoclast function, healed successfully.
 - Discussion
 1. Preventive strategies:dental examination and treatment prior to beginning bisphosphonate therapy
 2. avoid elective surgical procedures
 3. Treatment: conservative antibiotic therapy and oral rinses /surgical resection(especially for severe ONJ)→the results are unpredictable
 4. Adjuvant treatment modalities that lack enough evidence (parathyroid hormone therapy, ozone therapy,35 hyperbaric oxygen therapy, autogenous growth factors (ie, platelet- rich plasma)
 5. recommend biopsy before deciding on management
 6. CBCT:reduced radiation exposure and improved resolution
 7. CBCT may facilitate early diagnosis and identify sequestrum
 8. examination→the ultraviolet spectrum that can identify a fluorescent marker such as tetracycline(incorporated into remodeling bone).
 9. Wood's lamp: osteomyelitis and osteoradionecrosis,

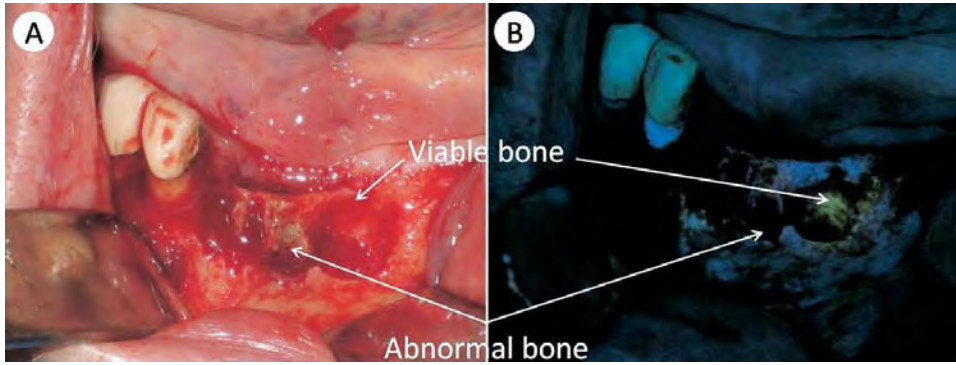
Wood's lamp

- Robert Williams Wood in 1903 using "Wood's glass",
- ultraviolet light is shone (365 nanometers)
- 1925 that the technique was used in dermatology
- Wood's glass :a light filter used in communications during World War I.
- removed the visible components of a light beam, leaving only the 'invisible radiation' as a signal beam
- The lamp must be used in a totally dark room.
- The suitable distance is 5 to 6 cm.
- For dermatology:
 - Thick corneum layer→White fluorescence
 - Normal/healthy skin→Blue-White
 - Oily areas of the face / comedos→Yellow or Pink
- To identify actively mineralizing
- high tetracycline deposition →greenish-yellow
- moderate deposition →white
- poor deposition → dark





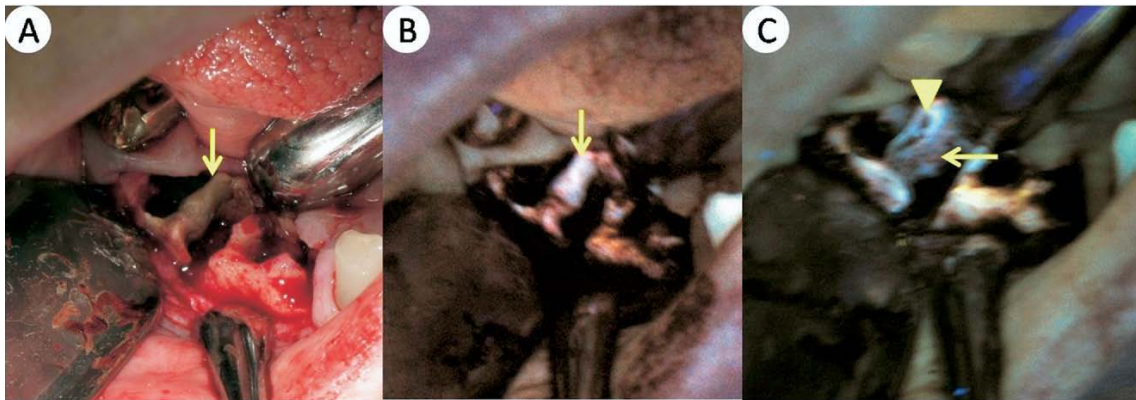
Clinical indicators such as bleeding bone: may not reliably

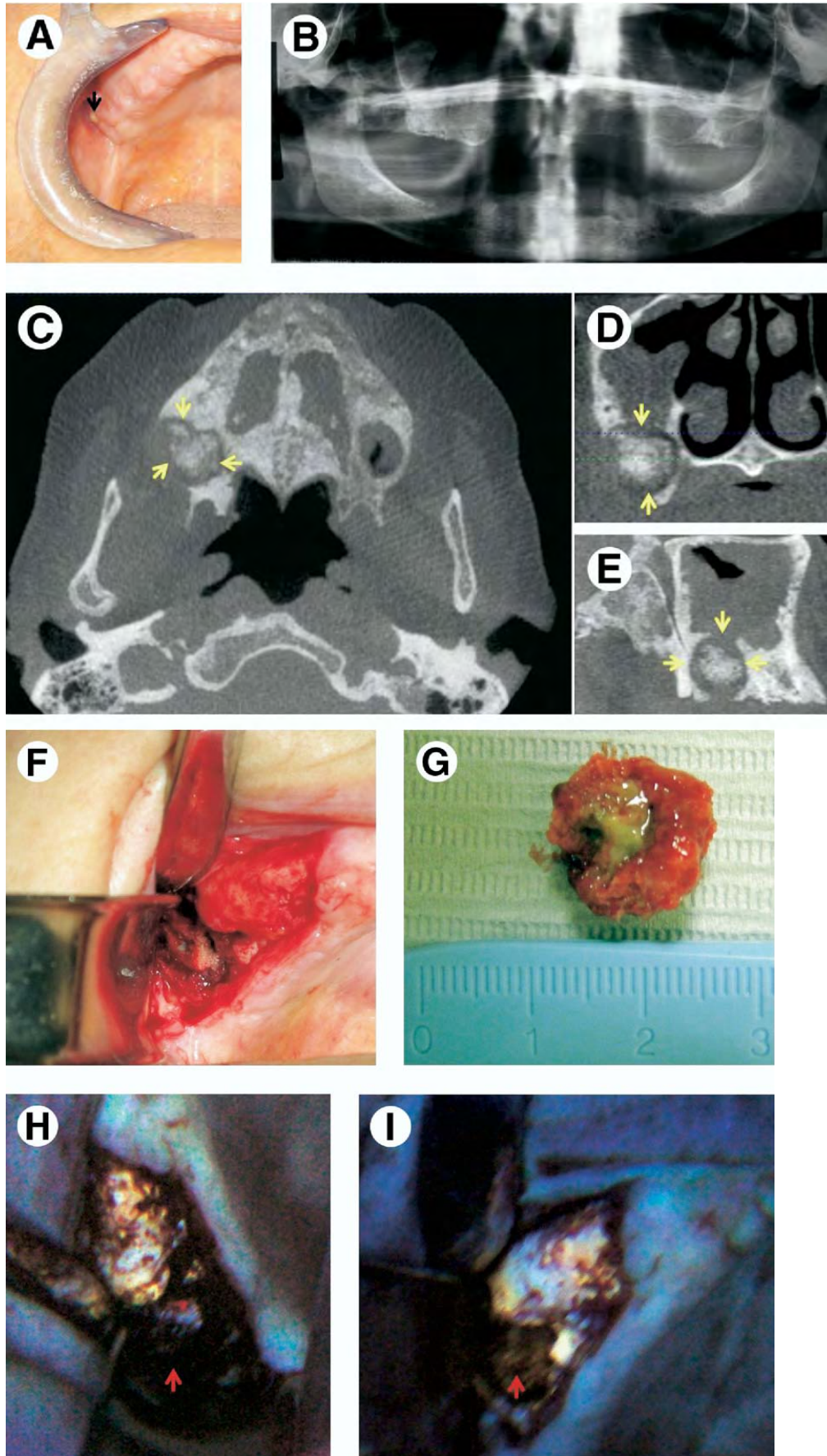


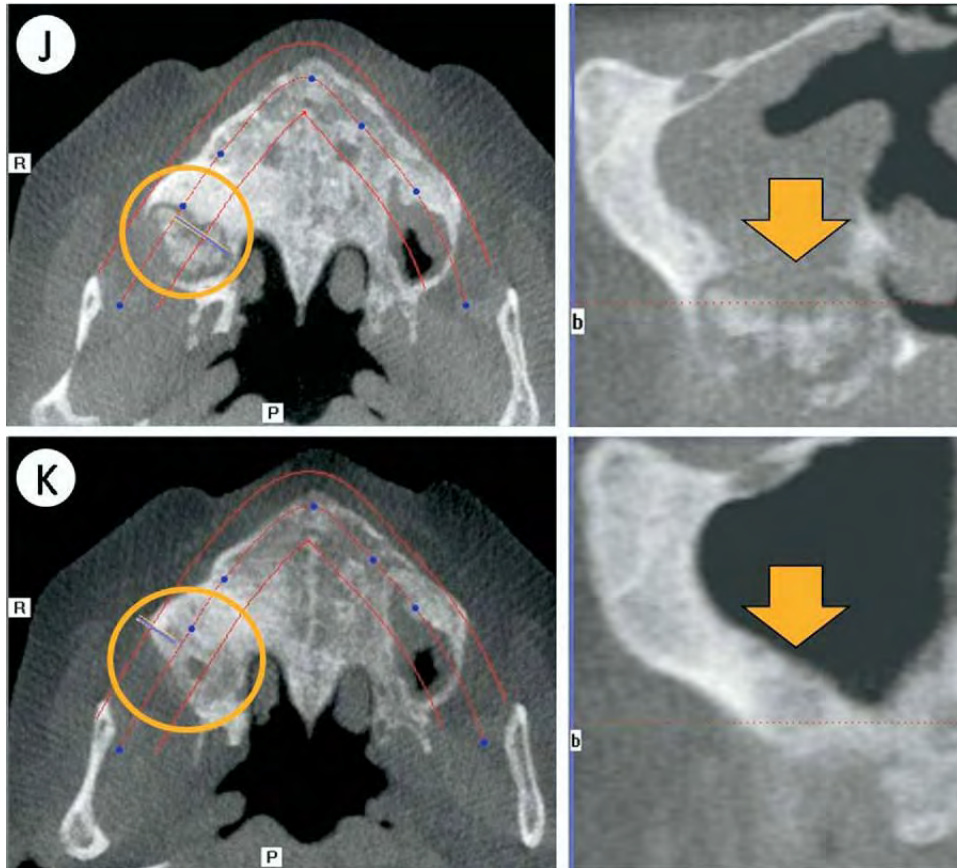
underesti
mated
due to

lack of visible change on radiograph

Although appearing clinically necrotic, evidence of subperiosteal remodeling has been observed







題號	題目
1	Which is the most important symptom of osteonecrosis? (A) Pain (B) Soft tissue inflammation (C) Local anesthesia (D) Mobile teeth
答案(A)	出處：oral& Maxillofacial pathology Second edition p.746
題號	題目
2	Which one is not the X-ray finding of osteonecrosis? (A) osteolysis (B) osteosclerosis (C) widening of the periodontal ligament (D) persisting alveolar bone sockets (E) Root resorption
答案(E)	出處：Tetracycline-Guided Debridement and Cone Beam Computed Tomography for the Treatment of Bisphosphonate-Related Osteonecrosis of the Jaw: A Technical Note Oral Maxillofac Surg 66:2646-2653, 2008