

● OPG ● PANORAMIC X-RAY

Full-Mouth X-Ray Kya Dikhata Hai?

Aur Kanpur ke dentists treatment se pehle isko kyun maangte hain

Yeh “sabhi daanton ki film” nahi hai. Yeh dono jaw ka **ek wide map** hai — bone, wisdom teeth, joint aur bone-level ke liye best. Lekin do back teeth ke beech ki shuru-wati cavity isi mein nahi dikhti. Wahi wajah hai ki OPG ke saath **2-3 chhoti films** bhi lete hain.

OPG JYADA TAR BEST HAI

✓ Bone level — har root ke aas-paas kitni hai

✓ Wisdom teeth, impacted teeth, cysts, fractures

✓ Jaw joint (condyle) aur maxillary sinus floor

✓ Implant / braces / full-mouth rehab planning

✓ Dated baseline jo saal-dar-saal compare ho sake

OPG JYADA TAR NAHI DIKHATA

✓ Do back teeth ke beech ki shuru-wati cavity

✓ Ek hi specific daant ka canal anatomy

✓ True 3-D position — sirf “paas hain” dikhata hai

✓ Nerve se exact 3-D doori ka hisaab (wahi CBCT ka kaam)

✓ Ek hi daant ka close-up detail

2-D

Panoramic ek wide sweep hai — close-up nahi

3-D

Exact 3-D position sirf CBCT deta hai

15-20S

Digital capture — itni der still rehna hota hai

O

Jab sawaal hi nahi hai, tab scan ki zaroorat bhi nahi

CHAPTER 1

Ek Daant Ki Close-Up Photo Se Baaki 31 Ka Koi Pata Nahi Chalta

Mirror, probe, blunt instrument aur gum scores — examination achhi hai, par sirf utna dikhata hai jitna light dikha sakti hai. Jo findings sabse zyada asar karti hain, woh jaw ke peeche ya gum ke neeche hoti hain: cyst, nerve se takra hua wisdom tooth, root fracture, jaw fracture, early lesion.

◆ Chhupi hui cavity

Sabse pehli cavity ek shadow hoti hai jo do daanton ke contact ke beech rehti hai — aankh se nahi dikhti, aur air-based “laser” decay detectors bhi ise aksar miss karte hain. **Radiograph hi reference standard hai.**

◆ Bone level, gum level nahi

Gum aur daant ka attachment bilkul theek dikh sakta hai jabki supporting bone peeche gir chuka ho. **Loose daant bacha ya nahi, yeh sirf bone batata hai** — gum nahi.

◆ Wisdom teeth aur jaw structure

Wisdom teeth, supernumerary (extra) teeth, jaw joint ki position aur jawbone ka shape — yeh chair par dekh kar **bilkul nahi pata chalta**. Inhe dekhne ke liye hi scan maanga jaata hai.

◆ Dated baseline record

Date ke saath ek panoramic image **measurable bone levels** deta hai, taaki gum health yaad se nahi balki objectively saal-dar-saal track ho. Saalon baad pehli visit par yeh sabse zyada kaam aata hai.

CHAPTER 2

Wo Image Kya Kya Dikhata Hai — Aur Dentist Use Kis Order Me Padhta Hai

Ek experienced dentist panoramic image ko right se left, aam tor par **ek minute se bhi kam** me, ek fixed order me padhta hai. Us sequence ko samajhna scan ki value samajhne ka sabse tez tarika hai.

01 — BAHAR KE EDGES

Rami — mandible ke khade bhaag — aur upar ke corners par mandible ka head & neck, yaani **condyle**, jo tempormandibular joint banate hain.

02 — BEECHE KI SAFED BAND

Mandible ka body gehra safed band; uske andar fine honeycomb trabecular bone, aur usmein se guzarne wala gehra channel — **inferior alveolar canal**, jo neeche ke daanton ki nerve aur blood vessels laata hai.

03 — UPAR KA MAXILLA

Maxillary sinuses ki do badi gehri cavities, beech mein **nasal septum**, aur **hard palate**.

04 — DONO TAAF KE BEECH: UPPER AUR LOWER DENTAL ARCH
Crowns, root outlines, maujooda fillings aur crowns, bridge work, aur koi bhi unerupted ya impacted daant.

IS EK SWEEP SE DENTIST KYA ASSESS KAR SAKTA HAI

Har daant ki sankhya, position, angulation

Har root ke aas-paas bone ki height

Root tip par apical infection ka dark halo

Radiolucent cyst ya tumour

Impacted wisdom tooth ka nerve aur second molar se rishta

Mandible mein fracture lines

Bite ka over-eruption ya collapse

Saalon se na dikhe patient ke dono jaw ki haalat

CHAPTER 3 · RECOVERED TABLE

Teen Technologies, Teen Alag Sawaal — Kaun Kis Sawal Ka Jawab Hai

Ye table blog ke page source se recover kiya gaya hai. Teenon techniques ek jaisi lagti hain jab tak aap har ek ko us sawaal se na jodein jo usne banane ke liye banayi gaya tha.

Examination	Image type	Best at answering	Approx. dose	Typical use
Bitewing	2-D, small, andar	Do daanton ke beech ki cavities; beech ki bone level	Sabse kam (single image)	Routine decay screening, gum-disease monitoring
Periapical	2-D, small, andar	Root tip, ek root ke aas-paas bone, canal anatomy	Bahut kam (single image)	Root canal, endodontic diagnosis, trauma follow-up
Occlusal	2-D, badi film, andar	Ek arch ka wider area, bachche, fracture localisation	Low-moderate	Paediatric checks, midline fractures, local lesions
Panoramic (OPG)	2-D, dono jaw ka ek wide sweep	Overall bone, tooth position, wisdom teeth, joints, sinuses	Moderate	New-patient baseline, wisdom teeth, implant & brace planning
Cephalometric	2-D lateral skull film	Skeletal jaw relationship aur growth pattern	Low-moderate	Orthodontic measurement
CBCT	3-D volume, koi bhi field of view	Ek chhote area ki structures ki exact 3-D position	Dental set mein sabse zyada	Impacted tooth-nerve distance, implant mapping, complex surgery

CHAPTER 3

Ise Decision Rule Ki Tarah Padhiye — Sawaal Badliye, Toh Technology Badli

Ek hi 2-D panoramic image sirf yeh *suggest* kar sakta hai ki do structures aapas mein paas hain — asli teen-dimensional rishta confirm nahi kar sakta. Isi liye surgical extraction se pehle limited-field CBCT aksar add kiya jaata hai.

SAWAAL
“Kya in do specific daanton mein decay hai, aur beech ki bone girayi hai?”
• **JAWAB: BITEWING**
Do daanton ke beech ki cavity aur unke beech ki bone level — yahi bitewing ke liye bana hai.

SAWAAL
“Yeh impacted wisdom tooth nerve se exactly kitne door hai, teesre pehlu mein?”
• **JAWAB: CBCT**
2-D image “paas hain” dikha sakta hai, doori nahi. Limited-field CBCT hi 3-D rishta measure karta hai — 3-D imaging ka sabse useful kaam.

SAWAAL
“Implants, braces ya full-mouth rehab se pehle **poora picture** chahiye.”
• **JAWAB: PANORAMIC**
Overall bone, wisdom teeth, sinuses aur joint structure — usually clinical exam ke saath, aur jahan precision chahiye wahan region-limited CBCT.

CHAPTER 4

Kab Scan Zaroori Hai — Te Zaroorat Par Tika Hua Faisla

Clinicians calendar nahi follow karte — wo **selection criteria** follow karte hain. Isi wajah se ek ethical dentist aksar patient ke khud offer karne par bhi panoramic lene se mana kar deta hai.

1 Justification

Kya history ya clinical examination ne koi genuine indication banaya hai — ya machine to hai isliye image ban gayi?

2 Optimisation

Kya yeh sabse chhota aur sabse kam dose wala exam hai jo sawal ka jawab de sakta hai?

3 Documentation

Kya pichli image abhi bhi valid hai — ya clinical picture change hone par hi renew karna sahi hai?

“A panoramic X-ray is a map of your mouth, not a microscope. Used for the right question, it prevents surprises. Used without a question, it only adds radiation.”

— **Modern dental radiographic selection criteria** ke peeche ka siddhant

CHAPTER 4

Genuine Indication Aur Wo Cases Jahan Scan Aam Tor Par Nahi Hona Chahiye

2025 ke ADA aur AAOMR recommendations poore moderation aur *selective 3-D imaging* ke around framed hain — aur joint endodontic position statement bhi kehti hai ki CBCT routine na ho.

SAHI INDICATION
Jiska origin unclear hai — dard ya swelling
Saalon baad pehli visit, koi purana record nahi
Wisdom teeth assess karna — removal ya monitoring?
Jaw ka suspected fracture, cyst ya lesion
Implant, orthodontics, major surgery ya full-mouth rehab ki planning
Periodontal bone levels ka time-over-time monitoring
Close-up film normal hai par dard jaari hai
Treated lesion ka healing confirm karna

AMATUR NAHI — BARSAAI NAHI
Routine check-up jismein examination normal hai aur recent diagnostic set file me hai
Repeat scan sirf isiliye ki patient nervous hai, jabki pichli image abhi bhi current hai
“Annual X-ray” ka aadat-bana reflex — evidence-based nahi
Routine CBCT order karna

Frequency risk follow karti hai — isiliye koi ek fixed “har saal sabke liye” rule evidence-based nahi hai.

CHAPTER 4 · RECOVERED FIG

Bitewing Screening Ka Kitna Interval — Patient Group Ke Hisaab Se

Bars har commonly recommended range ka **midpoint** dikhate hain. High-risk bachche aur adolescents sabse chhote end par (12–24 months), low-risk adults sabse bade end par (24–36 months).



Panoramic scan isi schedule par repeat nahi hota — woh tab renew hota hai jab clinical picture badle ya naye treatment plan ke liye baseline refresh karna ho.

Har clinic bina rukiye jawab dene wali do sawaal: “Aap is scan se kaunsa finding nikalna chahte hain?” — jawab specific aur clinically plausible hua to scan justified hai. Aur “Result aane par aap kya alag karenge?” — jawab “kuch nahi” hua to scan zaroori nahi tha.

CHAPTER 5

Imaging Sabse Zyada Kab Kamaati Hai — Galat Andaze Ki Keemat Sabse Zyada Hoti Hai

Har bade treatment ko alag-alag cheezein chahiye hoti hain. Galat andaaza yahan mehnga padta hai — isi liye scan planning discussion ka hissa hona chahiye, standalone formality nahi.

😊 Wisdom tooth extraction

OPG batata hai daant erupted hai, partially ya fully impacted; uski mesioangular, horizontal ya vertical orientation; roots inferior alveolar canal se kitne paas; second molar se fused hai ya nahi. Jahan 2-D image nerve ke paas ka hint de, wahan small-field CBCT asli 3-D rishta measure karta hai.

🦷 Implants aur full-mouth rehab

OPG confirm karta hai vertical aur horizontal bone kaafi hai ya nahi, maxillary sinus floor aur mental foramen ki position, aur koi graft requirement ya site infection. Implant ki final position phir teen dimensions mein map hoti hai — panoramic image height exaggerate karta hai, **drill path measure karne ke liye use nahi hota**.

🔧 Root canal treatment

Yahan priority **periapical film** ki hai, panoramic ki nahi. Dentist ko canals ki sankhya aur curvature, periapical lesion ka size, root fracture ya obstruction, aur treatment ke dauraan working length confirmation chahiye.

🦷 Braces aur aligners

Panoramic image missing ya supernumerary teeth, impacted canines, purane orthodontics se root resorption, movement ke liye available bone aur wisdom teeth ki haalat document karta hai — wisdom teeth shuru karne se pehle nikalni pad sakti hain. Yeh usually cephalometric radiograph ke saath milta hai, jo skeletal jaw relations measure karta hai.

CHAPTER 6

Radiation Dose, Safety Aur ALARA Ka Siddhant

Dental radiography medical imaging ki sabse dose-efficient forms mein se hai, aur digital sensors ne film-based machines ke muqable dose aur kam kar diya. Par dose matter karta hai — koi bhi exposure zero-risk nahi hoti, aur high-risk patients (bachche, pregnant patients, pehle se badi cumulative dose) ko zyada ehtiyat se protect kiya jata hai.

ALARA — As Low As Reasonably Achievable: exposure ko jitna kam rakho, jitna clinician ko zaroori information lene ke liye reasonably chahiye.

Digital sensors + rectangular collimation — irradiated area kam, sirf dose nahi

Lead apron aur thyroid collar — jo examine nahi ho raha uski raksha

Settings patient ke size aur dentition ke hisaab se — default copy nahi

Positioning sabse zyada matter karti hai: sahi position, aligned teeth aur still tongue = pehli attempt mein usable image, aur wahi sabse bada radiation-safety device hai

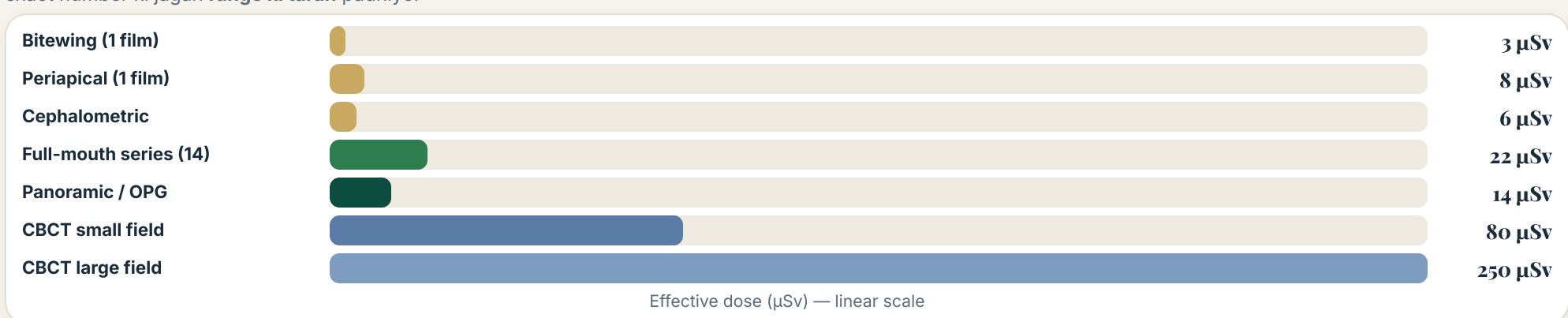
Bachche miniature adults nahi hain — chhote, low-exposure settings se image lete hain

Pregnancy openly discuss hoti hai, anxious avoidance nahi — justified hone par dental radiography pregnancy mein safe maani jaati hai

CHAPTER 6 · RECOVERED FIG

Appropriate Effective Radiation Dose — Har Dental Examination Ke Liye

2010 se 2020 tak ke published dose surveys se compiled figures. Asli values machine ki umar, collimation aur protocol ke hisaab se bahut alag ho sakti hain — isiliye inhe exact number ki jagah **range ki tarah** padhiye.



Ek bitewing ya periapical sabse chhota increment hai; poora **14-image intraoral series** ek single panoramic se lagbhag 2–3 guna padta hai; aur limited-field CBCT usse kai guna zyada — isiliye 3-D imaging defined indications ke liye reserved hai. Scale ke liye: ek aam insaan ko saal me **kai thousand microsieverts** natural background radiation milta hai, yaani ek dental exposure us saal ke background ka chhota hissa hai.

KEY TAKEAWAYS

Chhe Zaroori Baatein Jo Is Topic Se Yaad Rehni Chahiye

Panoramic scan ek **map** hai, microscope nahi — aur isi ek baat se sab kuch samajh aata hai, isiliye bahut se patients ko ajeeb lagta hai ki OPG ke baad 2-3 chhoti films kyun lete hain.

01 — MAP, CLOSE-UP NAHI

OPG bone levels, wisdom teeth, cysts, fractures, joint aur implants ke liye badhiya hai — par do daanton ke beech ki shuru-wati cavity ke liye nahi.

02 — DO ALAG SAWAAL

Panoramic ek wide 2-D sweep hai, close-up films high-resolution hain, CBCT 3-D volume hai. Teenon ek jaisi nahi hain.

03 — JUSTIFY, REPEAT MAT

ADA aur AAOMR kehti hai: imaging history aur clinical exam par justify honi chahiye, sabse chhoti adequate exam par optimised honi chahiye, aur machine available hone par dobara na ho.

04 — DOSE LOW HAI, PAR ZERO NAHI

Digital imaging film se zyada safe hai, protection abhi bhi routine hai — par bina poore baar-baar scan nahi.

05 — APNI COPY RAKHIYE

Image ki digital copy maangliye, upar-neeche ke arches aur bone levels dikhawayein, aur saath ki **date** note kijiye — wahi decide karti hai kab renew karna hai.

06 — SECOND OPINION HAKK HAI

Bina aur baad mein scan propose ho — ya baar-baar bina kisi reason ke — to doosri salah lena samajhdaari hai, aapka poora haq hai.

SECOND OPINION KAB LENA CHAHIYE — YEH GANI GALATI NAHI HAI, PAR SAWAAL POOCHNE KA MAUKA HAI

Clinic baar-baar same panoramic scan repeat kar rahi hai, koi indication nahi batati

Ek daant ke masle ke liye poore jaw ka CBCT propose kiya gaya

Aapko apne records ke liye koi image hi nahi di jaati

Clinical examination se pehle scan kar liya gaya

Ordering clinician expected finding ka naam hi nahi bata sakta

Treatment Se Pehle Poora Picture Dikha Lijiye

Digital panoramic scan **kai minute** me ho jaata hai — aap machine me khade ya baith-te hain, **15 se 20 second** tak still rehte hain, aur image turant screen par aa jaati hai. **Koi dard nahi, koi injection nahi, koi recovery time nahi**. Planning discussion ke dauraan scan maangliye — standalone formality ki tarah nahi — aur dentist se image par **saath-baith** karke findings samjhiye: kya dikha, kya nahi dikha, aur agle step kya hai. **Koi treatment ka faisla scan dekh-te nahi, poori clinical examination ke baad hota hai. Appointment book kijiye.**

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