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10 QUESTIONS TO ASK BEFORE INVESTING IN CBCT

Important factors to make your technology a (sound) investment.

Ask These 10 Questions Before investing in CBCT (3D Imaging Technology)

There are many options when it comes to choosing a dental cone beam computed tomography (CBCT) system, also referred to as a 3D scanner. For most dentists, a CBCT system will represent one of the costliest investments they have made in their practice. However, with correct planning and product choice, a dental CBCT system can be an excellent investment that will provide a significant return and improve the patient experience.

A hasty decision without knowing the details of the product and the true cost of ownership can result in overspending and under-utilization of the unit. Both overspending and under-utilization can result in a bad investment where the end user is paying more monthly than the CBCT is helping to produce in revenue. Before making the plunge and investing in a CBCT unit, ask the following questions to help narrow down your alternatives.

1. What field of view (F.O.V.) meets your needs?

The FOV of the CBCT system you ultimately decide on should be appropriate for the types of treatment you are seeking to address with the technology. If you plan on using your units specifically for endodontics, then a small FOV (i.e. 40X40mm or 40X80mm) will fit your needs. The J. Morita F40 is one unit that was designed specifically with endodontists in mind. It captures a small region with very good detail and a low radiation dose. If you are placing implants and hope to do guided surgery, then an F.O.V. capable of getting an entire arch would be required. To accomplish this, one would minimally need an 80X40 F.O.V., but many clinicians and manufacturers assert that a 100X40 F.O.V. is better for capturing the entire arch. The J. Morita R100 offers 6 F.O.V.s ranging from 40X40 to 80X100. The Carestream 8100 offers 4 F.O.V.s from a 40X40 to an 80X90. The R100 and CS-8100 would both be considered mid F.O.V. units. The i-Cat flx, Sirona Galileos and the Vatech Green all offer larger F.O.V.s suitable for oral surgery and orthodontics. The Sirona Galileos comfort offers a 150X150 F.O.V., the Vatech Pax-i Green offers a 160X100 FOV, and the i-Cat flx offers the largest F.O.V. at 230X170.

Some CBCT units offer a wide range of F.O.V.s suitable for multiple regions of interest. J. Morita's newest unit, the Veraview X800, offers F.O.V.s ranging from 40X40 to 150X140. Clearly, there are many choices when it comes to units with varied F.O.V.s. Assess your use and what F.O.V.s fit your needs and then narrow the choice down to machines that have the desired F.O.V.(s).

2. How do I choose a machine that will give me the image quality that fits my needs?

Image quality in CBCT is determined by a variety of factors. The technical specifications such as voxel size are meaningless if the eye cannot tell the result. Also, as voxel size decreases, signal to noise ratio increases, so the smallest voxel does not always produce the best image. Because of the implications that one specification (e.g. voxel size) will have for other specifications and image quality in general, it is not very useful to evaluate a CBCT system

based on one or a few specifications. The best bet is to narrow down your choices to 3-4 machines and look at many scans on live patients from each unit. Let your eye be the guide to what is good image quality.

3. Are there any state specific regulations that I need to be aware of prior to purchasing CBCT?

Some states, such as Michigan and Connecticut, require a "certificate of need" prior to purchasing a CBCT unit. In MI the process can take 6 months to a year and the application cost \$3000.00. Applying does not guarantee being granted the C.O.N., so it is best to look at the states selection process prior to planning your purchase. Dental TI performs installations of units nationwide and is always happy to provide guidance on the relevant regulatory processes for your area.

4. Is the area where I want to install CBCT in my office a suitable location?

In general, the primary concern with CBCT placement in your office has to do with scatter radiation when in the unit is in use. For this reason, if the unit is mounted opposite a room where staff is located when the machine is in use, lead lined drywall may be required. Whether or not you have chosen the CBCT unit you will be installing, it is highly advisable to request a scatter plot from the manufacturer(s). This will allow you to compare units based on additional shielding or space alterations that will need to be made prior to their installation. Your reseller should be able to provide the name of a physicist who can access your proposed area and the scatter plot to advise any shielding that may be required.

5. When I buy the machine what ongoing costs will I face?

Some companies (Sirona is one example) have a monthly fee that the practice must pay to get support and software updates. This fee can be substantial and a bad surprise if not anticipated prior to your technology purchase. Also, check into the warranty. Does it cover parts and labor or just parts? Who will be performing the warranty work? Is it an employee of the CBCT or a dealer service technician?

6. What is the training process and how much training is provided?

It is helpful to have a knowledgeable person selling you the system. CBCT is a very powerful technology that is accompanied by robust software with an incredible multiplicity of features and capabilities. For this reason, we always advise our clients to regard CBCT as a journey, rather than a destination. There are times that you will need advice or some additional training. The person selling you the machine should be knowledgeable enough and available to help. The best way to determine this is to speak to others that have already purchased from the supplier you are considering to find if the supplier is responsive after the sale. You want to buy from an expert who will make themselves available after the sale should you need it.

7. How will the CBCT software integrate with my other software?

Will you be able to launch the CBCT software from your other software or will you need to enter the patient's information manually. Will you be able to use the software at workstations other than the acquisition computer? Have you made sure your other computers are up to the specifications required by the 3D software? These are all questions that your reseller should be able to confidently assist you with

8. What is the clear strategy for use and billing?

For at least one full month prior to investing in CBCT, we recommend that you track the cases where it would be [beneficial to have a CBCT scan](#). This will give you a very good idea as to whether you will get a good return on the investment. In general, most of our clients use their CBCT units at least once a day-- some much more frequently. If you find that you would use the technology 2-3 times per month, it is probably not a wise investment for your practice's existing workflow. We always recommend that you speak to users of the system that you are considering to find out where they have gotten their R.O.I. Our clients commonly report increased implant business and case acceptance as the greatest sources of revenue from implementing CBCT

9. Where do I go to get clinical help when needed?

It is very beneficial to have an association with a radiologist who can interpret scans when you are uncertain about pathologies. Most charge about \$75 to provide a scan interpretation. Many clinicians may be familiar with [BeamReaders](#) as a resource for radiology reports, image portfolios, and case sharing. Dental TI also partners with radiologists and other clinical experts to provide our clients alternative options for scan interpretations.

10. Where do I get help with medical billing?

If you plan on billing medical insurance, it is helpful to have insurance staff trained for medical billing. An alternative is to use a third-party medical billing service, of which there are many. The choice between managing medical billing form within your practice versus choosing to outsource medical billing is one that should be made in accordance with your practice's unique situation.

By addressing these questions, you can make a sound investment in CBCT technology for your practice! Please don't hesitate to contact Dental TI at 1.800.672.5733 for more information on the technology, our process, and comparing CBCT systems.