



Ideal for Intrafraction Motion Management

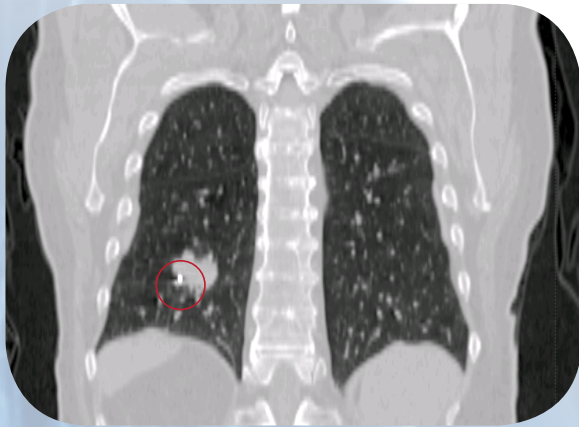
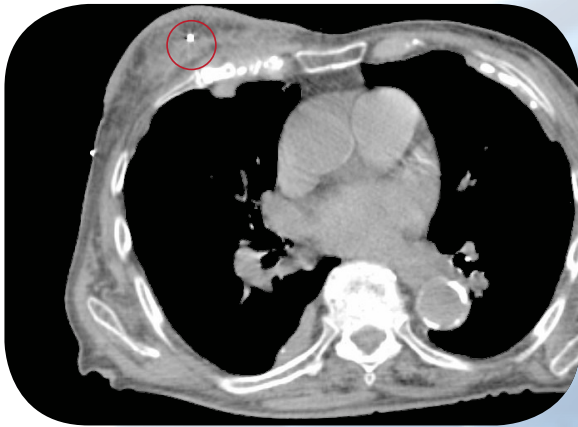


Breast

Gold Anchor can be implanted during surgery to mark the surgical cavity after lumpectomy. The marker can then be used to improve accuracy in delineation of the surgical cavity during IGRT.

Gold Anchors can also be implanted percutaneously in breast, e.g. to facilitate a boost to breast tumors prior to surgery.

Gold Anchor is more visible on kV than surgical clips and attach stronger to the tissue than surgical clips and traditional markers. It is also visible on MRI.



Abdominal organs

The implantation of traditional markers can lead to bleeding, painful bile leakage when implanted in liver and, for example in the case of colorectal metastases, to the spread of tumor cells (seeding). Gold Anchor is available in the same type of ultrathin needles that have been used for over 60 years for fine needle aspiration cytology (FNAC) with no to very little harm.

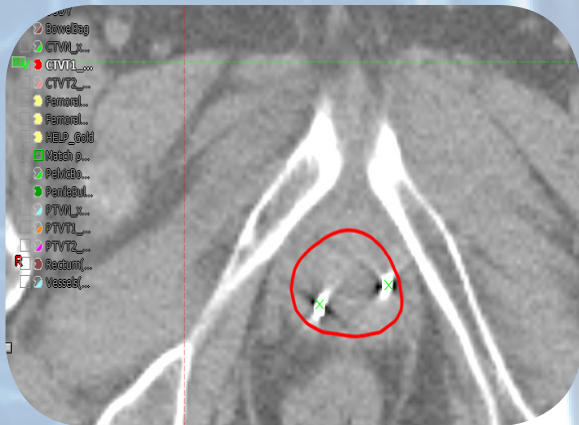
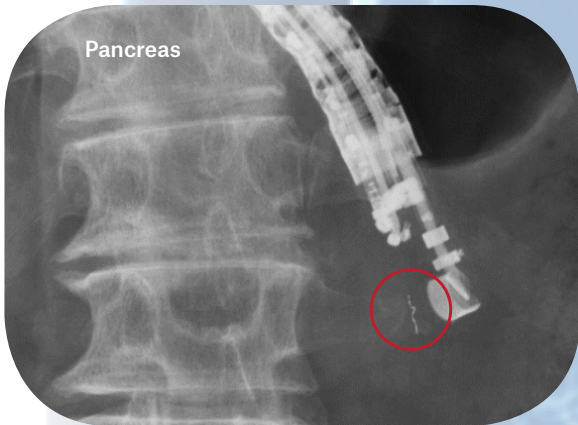
Gold Anchor is suitable for percutaneous implantation in most abdominal tissue organs, e.g. liver, pancreas, kidney, adrenal gland, inguinal metastases, and oligomets in abdomen.



Placement through endoscopes

Some Gold Anchor users have chosen to transfer the Gold Anchor marker into 22G EBUS-TBNA or EUS-FNA needles. This enables placement of Gold Anchor through endoscope in central lung, esophagus, pancreas, and rectal tumors.

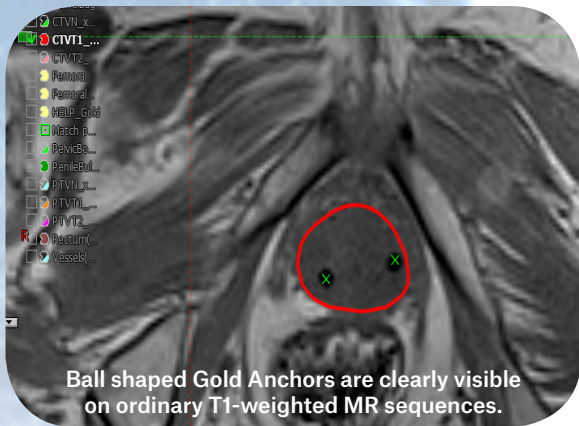
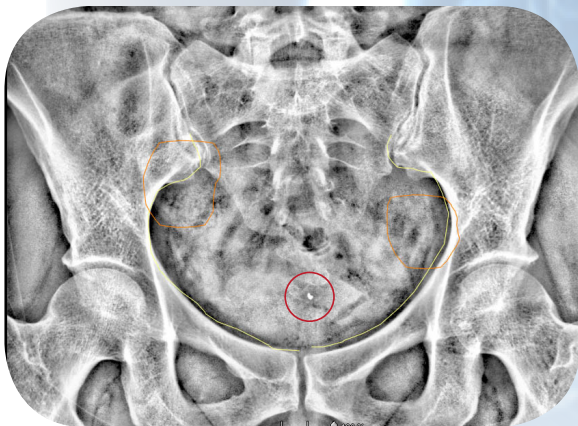
Transferring the Gold Anchor fiducial marker is easy since the Gold Anchor needle (GA150) can be inserted into the needle tip of the 22G needle.



Gynecologic organs

The cervix is prone to movement. Changes in target position and shape may be caused by rectum- and bladder-filling changes, but may also be due to tumor shrinkage during radiotherapy. Fiducial markers are therefore useful to guide both external-beam and internal radiotherapy (brachy).

Gold Anchor expands outside the needle and anchors in the tissue while traditional markers have a tendency to migrate and fall out of the vaginal wall and cervix.

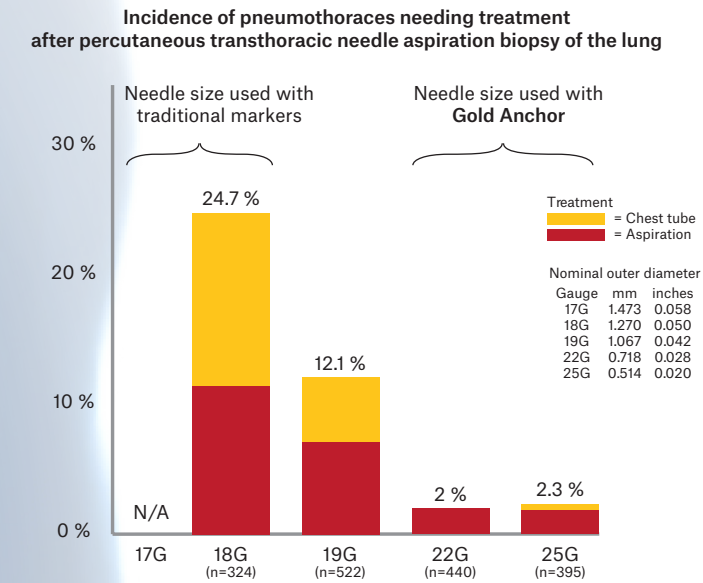


Ball shaped Gold Anchors are clearly visible on ordinary T1-weighted MR sequences.

Peripheral lung

Lung tumors can often be visualized with cone-beam CT but there are cases that can benefit from using fiducial markers, e.g. when there is atelectasis or when the tumor edges as blurry. Intrafraction motion management may also require implanted fiducials.

Gold Anchor's industry leading thin needles drastically reduce the risk of transthoracic implantation.



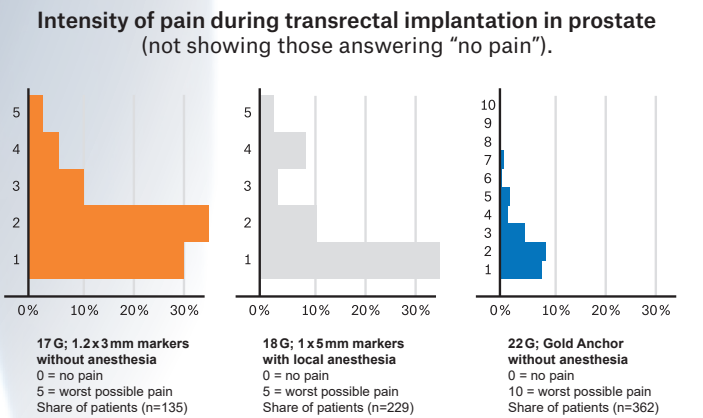
Source (18G and 19G): Geraghty, PR, Kee, ST, McFarlane, G, et al. CT-guided transthoracic needle aspiration biopsy of pulmonary nodules: needle size and pneumothorax rate. Radiology 2003;229:475-481
Source (22G): W S Chin, I Sng. The Chiba needle for percutaneous lung biopsy. Sing Med J. 1988; 29: 371-373
Source (25G): I. Naslund, P. Wersall, E. Castellanos, et al. Gold Anchor™ marker for IGRT, a new fiducial for high-precision radiotherapy. Int J Radiat Oncol Biol Phys 2009;75:S608-S609

Prostate

We generally recommend transrectal implementation. With Gold Anchor this procedure can be performed with a low risk of infection and without anesthesia.

If you prefer to implant markers transperineally you can also avoid anesthesia – using an EMLA patch 30 minutes before implantation is enough.

Gold Anchor's industry leading thin needles and unique marker design makes it possible to proceed with CT/MR for dose planning on the same day as implantation.



Source (17G): Igdem S, Akpınar H, Alpo G et al. Implantation of fiducial markers for image guidance in prostate radiotherapy: patient-reported toxicity. Br Radiol 2009;82:941-945.
Source (18G; 1x5 mm): S Gill, J Li, J Thomas, et al. Patient-reported complications from fiducial marker implantation for prostate image-guided radiotherapy. Br J Radiol. 2012 Jul;85(1015):1011-7.
Source (22G): Wioletta Mista, Leszek Miszczyk. An evaluation of side effects after gold markers (Gold Anchor™) implantation to prostate gland in patients with prostate cancer. Onkologia Info 2011;8;2:110-111.

Fiducial marker with superior clinical benefits



Great visibility

Also on MRI, thanks to unique material

The marker is only 0.28 mm or 0.40 mm thick, which improves the surface-to-volume ratio. The marker is made of an alloy of pure gold and 0.5% pure iron for improved MR visibility.

Benefits

- Clearly visible on kV, CT, CBCT, Ultrasound and MRI
- Ideal for Proton Therapy
- Trackable with CyberKnife when implanted with a ball or tadpole shape
- Reduced CT artifacts
- Easy registration of CT and MR images



Instant stability

Multiple cut-outs allow the marker to fold

The marker is passive and will form different shapes depending on implantation technique. Line shaped markers are useful for detecting plastic deformations and tilting. Completely folded markers are suitable for systems with automatic marker detection.

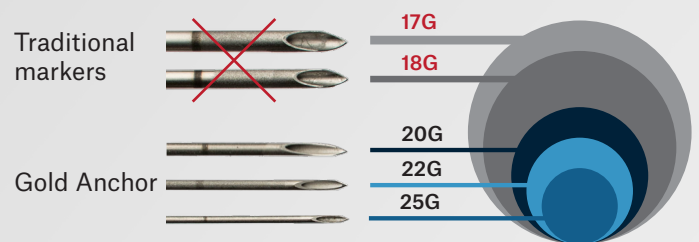
The thin Gold Anchor needle, that causes minimal bleeding and swelling, in combination with the strong tissue attachment of the marker, makes it possible to proceed with CT and/or MR for dose plan on the same day as implantation.



Minimally invasive

Industry leading thin needle

Fine needles for cytology have been used more than 50 years in all parts of the body with no to very little harm. Gold Anchor markers come preloaded in needles of the same size.



Benefits

- Reduce implantation time
- Reduce patient discomfort
- Reduce complications from implantation



Benefits

- Anchors directly
- Trust each marker
- Save lead time and travel

Product codes

Needle Ø	● 25G (0.5 mm)	● 22G (0.7 mm)				● 20G (0.9 mm)	
Length (cm)	15	8	15	20	25	20	35
Marker (mm)							
0.28 x 10	GA150-10			GA200-10			
0.28 x 20	GA150-20			GA200-20			
0.40 x 10		GA80-10-B	GA150X-10-B	GA200-10-B	GA250-10-B	GA200X-10-B	GA350-10-B
0.40 x 20		GA80-20-B	GA150X-20-B	GA200-20-B	GA250-20-B	GA200X-20-B	