

# Marker implantation trends



Radiotherapy equipment:	Linac with kV imaging	CyberKnife & Radixact tracking / TrueBeam ABH	TomoTherapy (MVCT) and Viewray	Proton therapy with kV imaging	
Implanted marker shape:	Ball or line	Ball	Ball	Ball	Line
Breast	2208-10-B	2208-10-B	2208-20-B	2208-10	2208-10-B
Head & neck* and peripheral lung	2515-10	2515-10	2215-20-B	2515-10	
Abdominal organs**	2515-10	2515-10	2215-20-B	2515-10	2515-10 2215-10-B
Prostate – transrectal implantation***	2220-10-B	2220-10-B	2220-20-B		2220-10-B
Prostate – transperineally and Cervix	2020-10-B	2020-10-B	2020-20-B		2020-10-B
Esophagus, central lung and rectal wall, through endoscope****	2515-10	2515-10		2515-10	
Bladder and rectal wall, through rigid cystoscope/rectoscope	2035-10-B	2035-10-B			

## Comments

The products mentioned above are those most typically used for a certain application.

If you prefer more visibility, choose a bigger marker.

If you find it important to minimize CT artifacts, implant the marker with a line shape or choose a smaller marker.

If the 2515 needle is too flexible for a certain application, try the stiffer 2208 or 2215 needle instead.

## Notes

\*Head & neck applications include for example tonsil, nodules, base of tongue and tissue close to the larynx.

\*\*Abdominal organs include for example liver, pancreas, kidney, adrenal gland and metastases in various places.

\*\*\*If you need a longer needle, use 2225-10-B or 2225-20-B instead.

\*\*\*\*Some medical teams have chosen to use 2515-10 and 2515-20 to transfer the marker over into the tip of a 22G EBUS-TBNA or 22G EUS-FNA needle, to enable marker implantation through endoscope.

## Product codes for products with markers made of 98.5% pure gold and 1.5% pure iron

Needle Ø	25G (0.5 mm)	22G (0.7 mm)				20G (0.9 mm)		
		15	8	15	20	25	20	35
Marker (mm)	0.28 x 10	2515-10	2208-10	2215-10	2220-10	2225-10	2020-10	
	0.28 x 20	2515-20			2220-20			
	0.40 x 10		2208-10-B	2215-10-B	2220-10-B	2225-10-B	2020-10-B	2035-10-B
	0.40 x 20		2208-20-B	2215-20-B	2220-20-B	2225-20-B	2020-20-B	