in the delivery rooms of most of our service hospitals, though the T-piece resuscitator is now available in all zonal and bigger hospitals. Having this facility is the need of the hour so that we can effectively use the T-piece resuscitator to administer positive pressure ventilation to newborn babies.

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Letter to the Editor

Technology acquisition in radiodiagnosis: Pros and cons

Dear Editor,

I read with extreme interest the original article titled “Life cycle costing as a decision making tool for technology acquisition in radiodiagnosis” by Chakravarty et al published in *Med J Armed Forces India* 2015; 71:38–42.¹

I must complement the authors who have brought out an important concept about technology acquisition in health care settings. The authors have passably and rationally elucidated that upgradation of an existing 1.5 T MRI to a state of art improved version along with increase in life cycle is an attractive alternative option to buying a brand new 3 T machine.

However, while agreeing with most of the viewpoints given by the authors, I must mention here that, the choice of newer version machines with large capital investment is not only governed by the break even economics but also is based on the progressive clinical settings and scientific expectations brought in by the evidence based practice and scientific quest. As the technology sector and health care delivery are considered areas of highly dynamic progression, the choice between complete replacement and upgradation on existing platform will remain a challenge in most health care providers in both governmental and corporate settings.

The rationale behind the huge investment on a newer 3 T MRI machine will be dictated by the clientele specialties/super-specialties demand. It is expected that the demand for the highly refined MRI machines with greater magnetic field strength especially in structural and functional neuro-imaging is going to be persistently high. Such requirements as well as tremendous research potential needs to be considered particularly in the institutional practice which would be an important factor justifying complete replacement to higher technology platform.

Change in hardware elements like magnet strength, increasing aperture diameter to partially reduce claustrophobia with cohesive in built software and acquiring faster sequences, are other important parameters which need to be examined in detail before making a decision for such a technology acquisition.

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Reply

Dear Editor,

The authors thank the reader for showing interest in the article and for the critical, constructive and pertinent issues raised in the letter.

The authors agree that health-care organizations, at any point of time, cannot ignore various progresses being made in technology evolution and up-gradation. It also merits consideration at this point that all claims for the “Latest and the

Greatest Technology” needs to be carefully assessed before accepting such claims to be true. Economics may not provide all the answers in the evaluation process, but will surely show the way for right questions to be asked for rational and consistent decision-making. The authors do not contest the technological superiority of 3T MRI machine, particularly for its exceptional imaging and research capabilities in neurosciences. However, every technology acquisition must be viewed from a System Concept, where mission fulfillment as well as Life-cycle cost will be expressed in various Figures-of-Merit (FOM) for arriving at the right decision in a particular organization. The authors agree that a 3T machine with a higher magnet strength and larger aperture diameter would be beneficial. However, changes in the major hardware components were not considered within the scope of the manuscript.

Assessment of high-end technology will always remain a challenge, particularly in the resource-constrained environment of a developing economy and Life-cycle costing is a time-tested viable tool that may be utilized to take right decisions when faced with competing claims from the market.

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Letter to the Editor

Dear Editor,

I read with considerable interest the original article titled “Life cycle costing as a decision making tool for technology acquisition in radio-diagnosis” by Chakravarty et al published in Med J Armed Forces India 2014; 71: 38–42.¹ Having worked with both 1.5T and 3T MRI, it was interesting to read your well conceived article on MRI life cycle costing. I have a few practical points to make.

Better coil technology and other factors have significantly improved 1.5T image qualities and it is still the practical choice while setting up a new MRI facility in our armed forces set-up.

However, a 3T machine is much better at functional brain imaging specially spectroscopy for metabolite spectral resolution and for MR Angiography. 3T MRI offers a definitely higher MRI image resolution for identifying structural changes in joint imaging. These are the two key areas which need interrogation so frequently in our serving population. Vascular imaging may need lesser contrast in 3T compared to 1.5T, offsetting the unit scan cost to some extent. Better SNR at 3T practically obviates the need for endocavitary coil use, further increasing patient experience and comfort.

However, to produce the best results out of the machine, we will need better trained and dedicated technicians to produce

the best out of the 3T machine, something which usually becomes almost impossible, given our service constraints.

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Reply

Dear Editor,

We thank the reader for showing interest in our article. We agree that a 3T MRI machine is technologically superior as

compared to a 1.5T MRI machine in certain aspects as has been mentioned by the reader and as also explained in table of the article. The main purpose of the article was not limited to direct technical comparison of 1.5T MRI machine with a 3T