

# Impact of Structured Reporting for Carcinoma of Oesophagus - A Simplified New Approach to Improve the Quality of Reporting

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## ABSTRACT

**Aim and objectives:** To assess the impact of implementing a structured report template on the quality of Computed tomography reports of esophageal cancer cases.

**Materials & Methods:** A prospective study with 30 biopsies proven cases of carcinoma of the esophagus, which were referred to Department of Radio diagnosis, SSIMS & RC, Davangere from Jan 2016 to Jan 2017 were carried out. Two separate qualified radiologists have reported each case, one in descriptive format and another in the structured report format. A structured reporting format was designed in tabular form keeping with esophageal wall growth and relationship with surrounding structures and ease of reporting as the main purpose.

**Results:** Both old descriptive and structured reports were given to the surgeons for feedback. Structured reports gave a better understanding of each case scenario rather than descriptive report.

**Conclusion:** Quality reporting is critical for accurate and effective communication of the information among multiple disciplines, for which a systematic structured approach is beneficial.

**Key words:** structured report, carcinoma of oesophagus, quality of reporting.

## INTRODUCTION

Esophageal cancer is a leading cause of cancer-related death worldwide and the treatment of esophageal cancer should be stage specific for better clinical outcome. [1,2] Early esophageal cancer has shown a good 5-year survival rate of 57%-78%. [3,4] MDCT plays an important role in detecting various findings of locally advanced carcinoma esophagus and metastasis, which helps the surgeons to decide the line of management. Squamous cell carcinomas (SCCs) and adeno carcinoma's are the most common esophageal cancers. [5] Risk factors for squamous cell carcinoma of the esophagus include tobacco. [6] The risk factors for the development of adenocarcinoma include reflux esophagitis and resultant Barrett's esophagus, due to the

chronic irritation of the mucosal lining and dietary factors. [7] Imaging studies play a key role in the Detection of local invasion and metastasis in patients with carcinoma esophagus. Thus, helping surgeons to triage the patients and choose the line of management. The usefulness and limitations of computed tomography are also discussed.

Two separate qualified radiologists have reported each case, one in descriptive format and another in the structured report, format. TNM staging used for reporting was latest "Seventh Edition of TNM Staging System for Oesophageal Cancer (AJCC)".

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**Aim and objectives:**

To assess the impact of implementing a structured report template on the quality of Computed tomography reports of esophageal cancer cases.

**MATERIALS & METHODS**

Prospective study with 30 biopsies proven cases of carcinoma of the esophagus, which were referred to Department of Radio diagnosis, SSIMS & RC, Davangere from Jan 2016 to Jan 2017 were carried out.

**DISCUSSION**

**Structured reporting templates for carcinoma of esophagus.**

Site/location of the growth	
Longitudinal length of the growth	
Circumferential growth	
Distance between superior tumor margins from carina.	
Distance of inferior tumor margin from GE junction.	
Arc of contact with aorta	
Triangle of fat	
<b>T1/2 Versus &gt;T3</b> <b>T3</b> <b>T4</b>	<ul style="list-style-type: none"> <li>• Tumor penetrates the serosa without invasion of the adjacent structures</li> <li>• <b>T4a:</b> tumor invades serosa (visceral peritoneum-pleura, pericardium, diaphragm)-Resectable.</li> <li>• <b>T4b:</b> tumor invades adjacent structures (aorta, trachea-bronchial tree, vertebra)-Unresectable.</li> </ul>
Mediastenal lymph nodes-	<ul style="list-style-type: none"> <li>• <b>N1:</b>1-2 regional lymph nodes.</li> <li>• <b>N2:</b> 3-6 regional lymph nodes.</li> <li>• <b>N3</b> <ul style="list-style-type: none"> <li>○ <b>N3a:</b> 7-15 regional lymph nodes.</li> <li>○ <b>N3b:</b> more than 15 regional lymph nodes</li> </ul> </li> </ul>
Metastasis	M1a- Cervical lymph nodes-(upper cervical carcinoma) or celiac lymph nodes (lower esophageal carcinoma). M1b-distant metastasis.

**Advantage of structured radiology reports for carcinoma of oesophagus over conventional reporting:** <sup>[8-10]</sup>

- Structured reports are made faster than conventional reports-Save the timing spent on dictation.
- Structured reports are comparatively more accurate, complete and appealing report.
- Physicians will better appreciate structured better than conventional report.
- Structured reporting is especially helpful for practitioners and hospital administrators who continue to seek

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- **Inclusion criteria:** Biopsy proven cases of carcinoma of oesophagus.
- **Exclusion criteria:** Nil.

A structured reporting format was designed in tabular form keeping with esophageal wall growth and relationship with surrounding structures and ease of reporting as the main purpose.

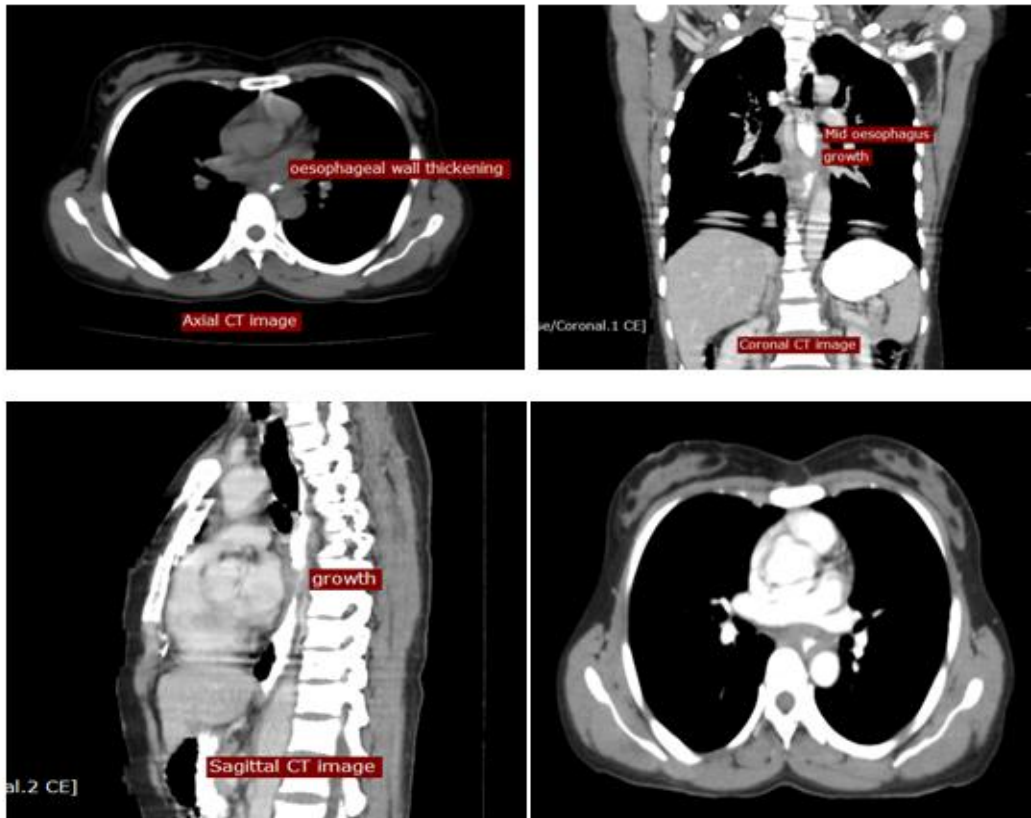
ways to improve their services and offer help to more patients.

**RESULTS**

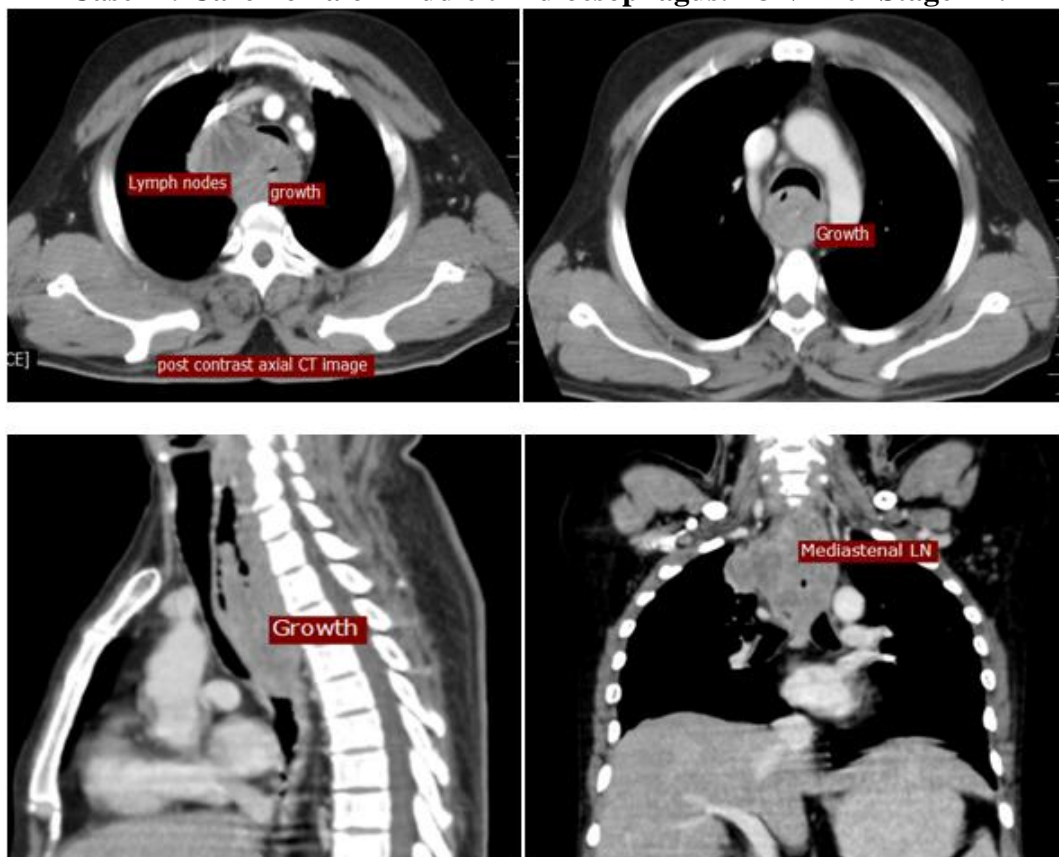
Both old descriptive and structured reports were given to the surgeons for feedback. Structured reports gave better understanding of each case scenario rather than descriptive report.

Surgeons found it subjectively easier to extract information from structured reports than from non-structured reports of Carcinoma of oesophagus and were more likely to have sufficient information needed for surgical planning.

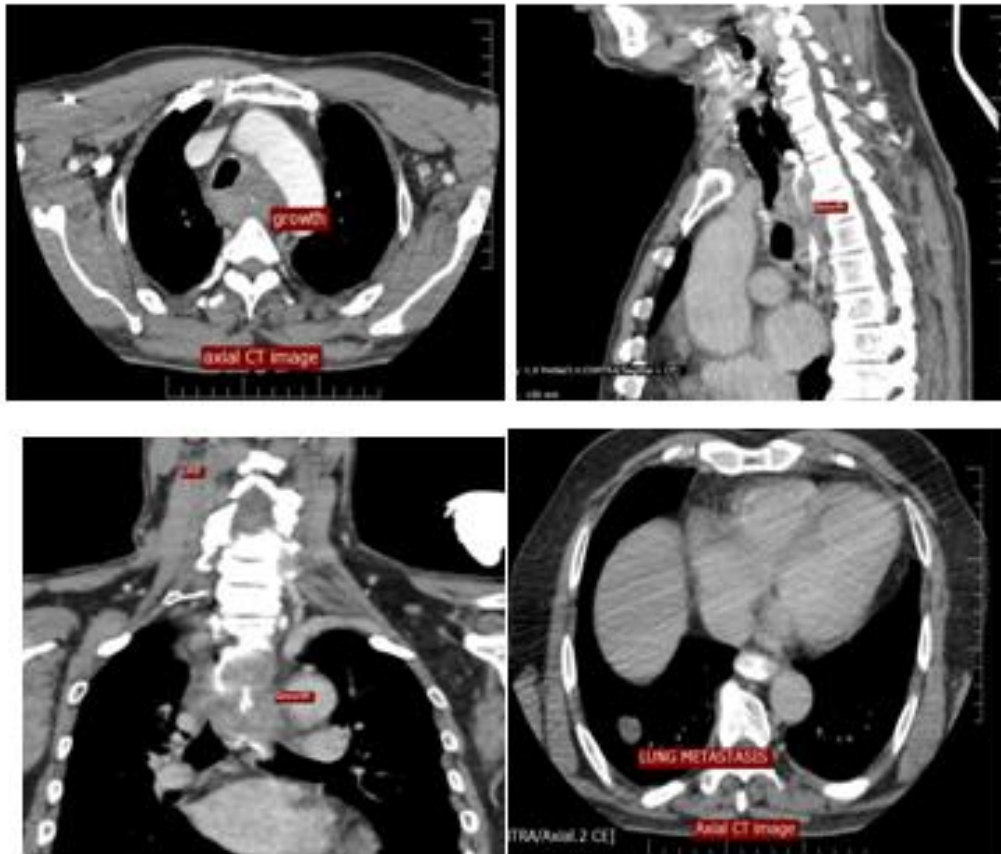
**Case-I: Carcinoma of middle third oesophagus. T3N0M0- Stage II**



**Case-II: Carcinoma of middle third oesophagus. T3N2M0- Stage III.**



**Case-II: Carcinoma of middle third oesophagus. T4N2M1- Stage IV.**



**CONCLUSION**

Management of oesophageal cancer is increasingly depends on MDCT chest. A lot of evidence has been accumulated indicating that MDCT chest can provide multiple prognostic findings and imaging features to guide proper management of oesophageal cancer patients.

Quality reporting is critical for accurate and effective communication of the information among multiple disciplines, for which a systematic structured approach is beneficial.

Structured reporting of carcinoma of oesophagus in patients with oesophageal cancer facilitates surgical planning and leads to a higher satisfaction level of referring surgeons in comparison to full text descriptive reports.

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How to cite this article: Rathod NK, Bhagwat KA, Kulkarni AM et.al. Impact of structured reporting for carcinoma of oesophagus - A simplified new approach to improve the quality of reporting. *International Journal of Research and Review*. 2018; 5(11):131-135.

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