



**Singapore Healthcare
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Introduction

What is tumor board?

A multidisciplinary meeting where many sub specialties meet to discuss complex cancer cases in order to plan individualized treatment options.

What is a database?

It is a collection of patient related data that can be used in research to analyze the information of groups of patients.

Problems faced

- ❑ Database
 - ❑ Maintained manually
 - ❑ Time consuming data entry
 - ❑ Multiple individually maintained databases scattered across one institution
- ❖ Tumor board
 - ❖ Not electronically captured
 - ❖ No use for research
 - ❖ Legibility

What is REDCap?

Research Electronic Data Capture

A free web-based application, used in 101 countries in 1883 institutions worldwide. It provides an intuitive interface for validated data entry; audit trails and automated export to common statistic packages.

Method

Tumor Board Database

Electronic tumor board database!

We merged the two entities by using REDCap.

We designed an interface to capture all possible head and neck malignancies electronically.

This data is automatically captured in the Head and Neck Database

The screenshot displays the REDCap interface for a tumor board database. It includes fields for patient identification (NRIC, Patient Name, Date of Birth, Sex, Race), clinical details (Presenting Doctor, Consultant in Charge, Histology Required, Patient present at presentation?), and a detailed diagnosis (T2 N2b M0 Poorly differentiated right tonsillar SCC). A section for co-morbidities lists conditions like Hypertension, Hyperlipidemia, Ischaemic Heart Disease, Diabetes Mellitus, and Chronic Renal Failure, each with a Yes/No selection. The interface is designed for structured data entry with dropdown menus and checkboxes.

Results

- Implemented in September 2015
- Default mode of case discussion
- 333 new patient records
- Accurate and analysable data
- Centralized database accessible to all subspecialties
- Reduction in manpower for database maintenance
- Subspecialty modules
 - Medical oncology
 - Radiation oncology
- Expanding to other departments
 - Gastrointestinal tumor board
 - Hepatobiliary tumor board

Before

The screenshot shows a handwritten medical record for a patient with a head and neck tumor. It includes fields for NAME, AGE, SEX, RACE, and Dr in Charge. The diagnosis is "Left mandibular high grade sarcoma b/g Right lung adenocarcinoma (palliative ms)". The record also contains a "Past medical history" section with details about HTN, Diabetes, and other conditions. The "Oncohistory" section describes the patient's history of lung adenocarcinoma and the current diagnosis of high-grade sarcoma. The "Presenting complaint" section mentions a large right lower lobe mass and a PET CT scan result.

After

The screenshot displays the REDCap interface for a tumor board database. It includes fields for patient identification (NRIC, Dr In Charge, Presenting Doctor, Biodata), clinical details (Name, Age, Sex, Date of Primary Diagnosis, Primary Diagnosis, ECOG, Smoking, Drinking, Other substance abuse), and a detailed diagnosis (T2N2bM0 Right tonsil poorly differentiated SCC Stage IVa). The interface is designed for structured data entry with dropdown menus and checkboxes.

Conclusion

By integrating the two different entities; tumor board and head and neck database, we have managed to create a viable solution to this age-old problem;

- Streamline our healthcare process
- Improve data collection and quality of our research database
- We have successfully killed two birds with one stone.

