

## Aim

Treat 100% of patients with high-grade glioma and are eligible for dual modality treatment within 6 weeks of surgery by Dec 2018

## Background

BC Cancer – Surrey is one of six full-service cancer centres of BC Cancer agency, British Columbia, Canada.

High grade gliomas, with a World Health Organization grade scale III/IV, are the most common form of primary brain tumours in adults. The survival rates range from 15-16 months for grade IV glioblastoma, and 36 months for Grade III. The preferred method of treatment is surgery followed by dual-modality radiation + chemotherapy for eligible patients. BC Cancer Surrey 2015-2016 data indicate that only 60% of eligible patients are meeting the 6 weeks window.

## Project Design & Strategy

1. Understand the current process, identify the system's "bottlenecks" and determine potential solutions. (See Fig. 1 Process flow Diagram)

2. Create a driver diagram to determine potential change ideas to test and implement. (See Fig.2 Project Driver Diagram)

3. Data collection on: Patient triage, consults' booking and treatment. (Data obtained from BC Cancer Health Information Services)

4. Execute change ideas to optimize patient's radiation planning and service delivery process

Test and execute our ideas on the triage/booking of new consults process

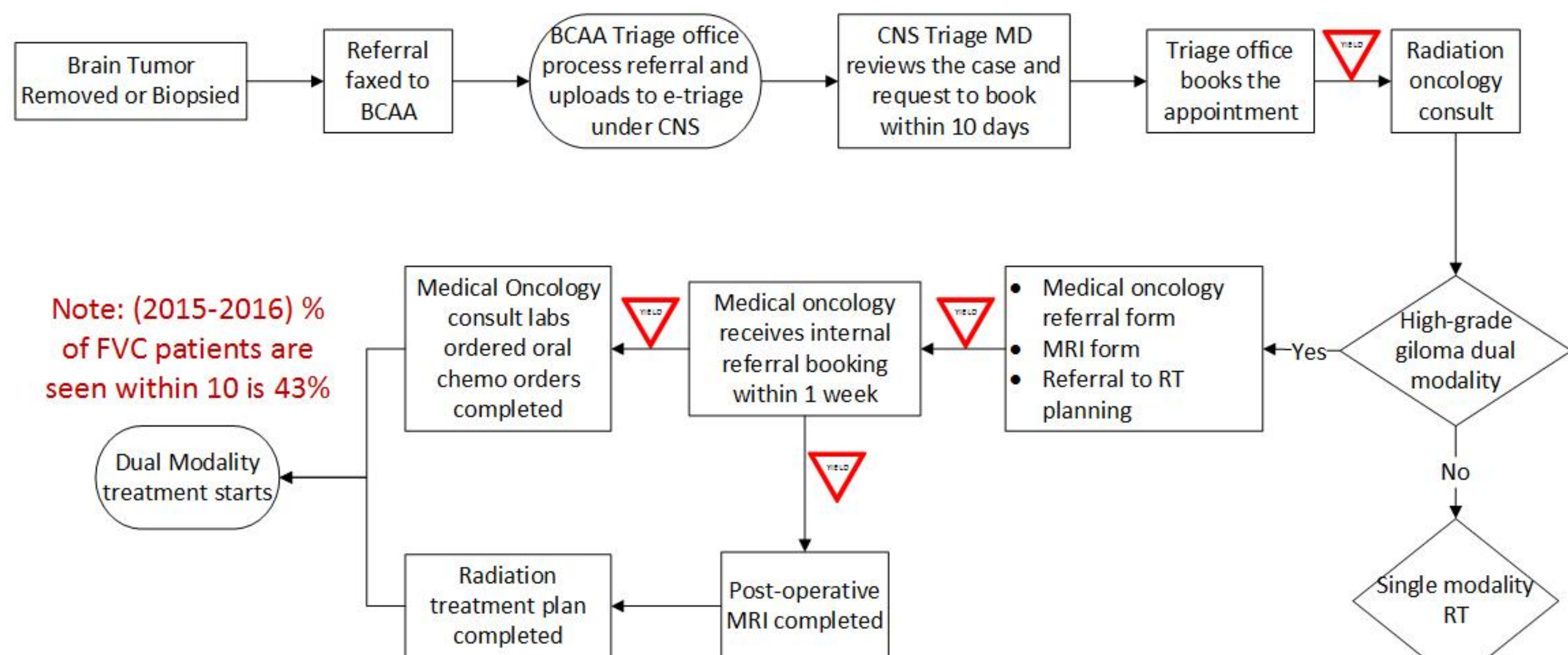


Fig. 1: Process Flow Diagram of Patient's referral journey to BC Cancer-Surrey

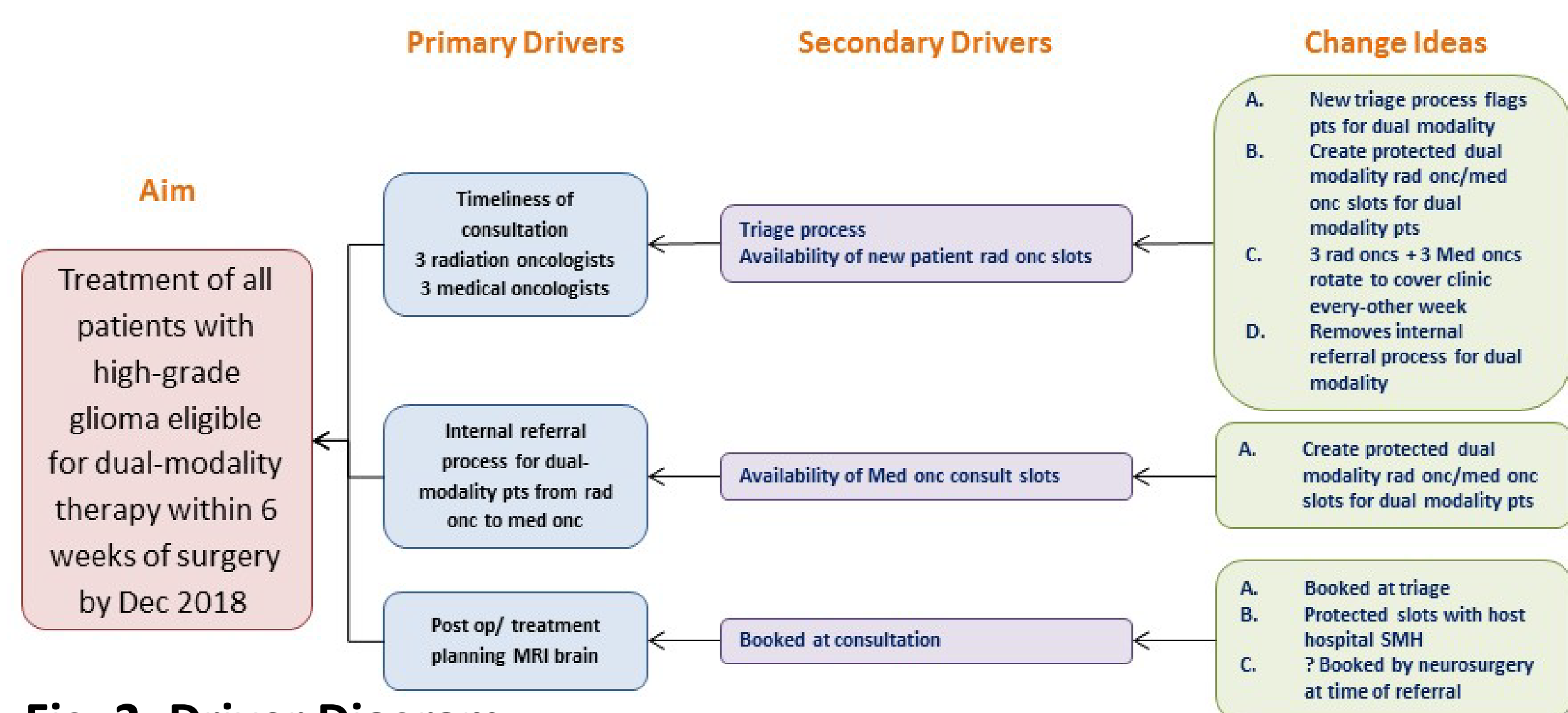


Fig. 2: Driver Diagram

## Project Team members

- Dr. Abdulwahab Al-Tourah- Project lead
- Drs. Arthur Cheung, Carson Leong and Andra Krauze- Radiation oncology
- Drs. Sylvie Bourque, Jesse Shustik- Medical oncology
- Taranjit Dhanda- Ambulatory care
- Anna Arnold- BC Cancer Surrey,
- Dr. Ursula Lee -SMH/BC Cancer Surrey Department head
- Dr. Lee Ann Martin-BC Cancer Quality & Safety
- Dr. Gary Pansegrau- BC Cancer Surrey Centre medical director
- Maryam Eltawil- Physician Quality Improvement-Fraser Health Authority

## Changes Made

1. **Triage process:** new high-grade gliomas referrals are flagged
  2. **Ambulatory care:** Secure dual modality new patient slot every other week with rotation between 3 radiation oncologist and 3 medical oncologist
- Patients are seen in one visit by both specialist back-to-back
  - PDSA cycle : will run this after each new patient is seen

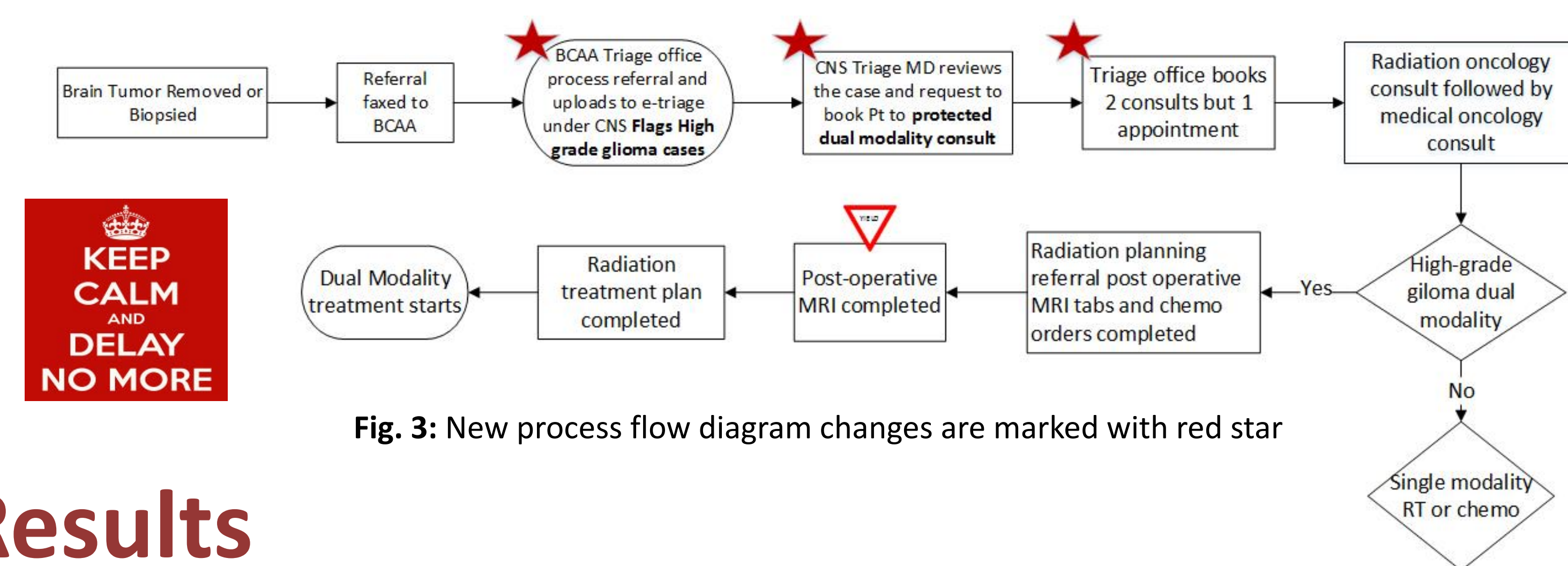
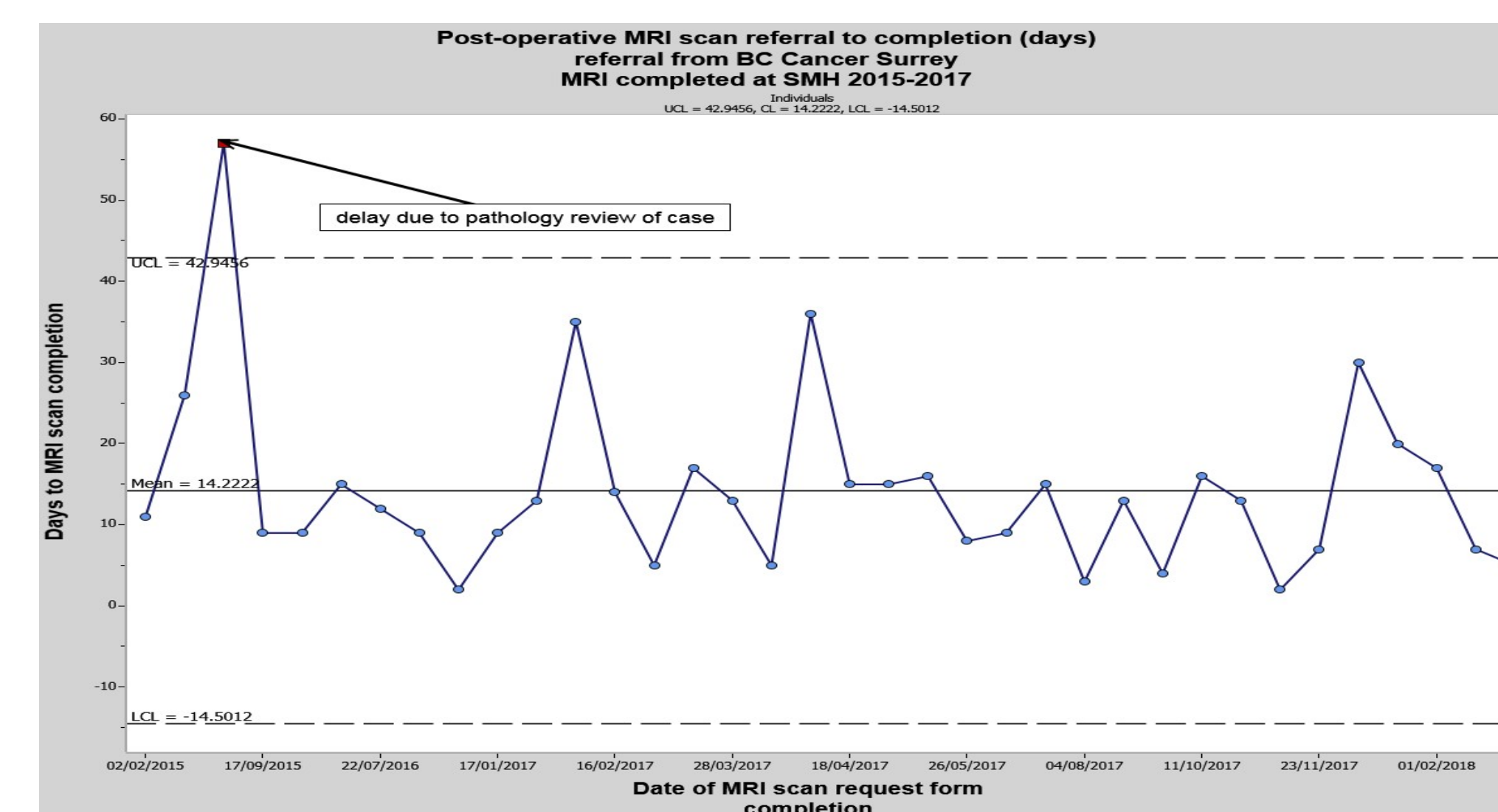
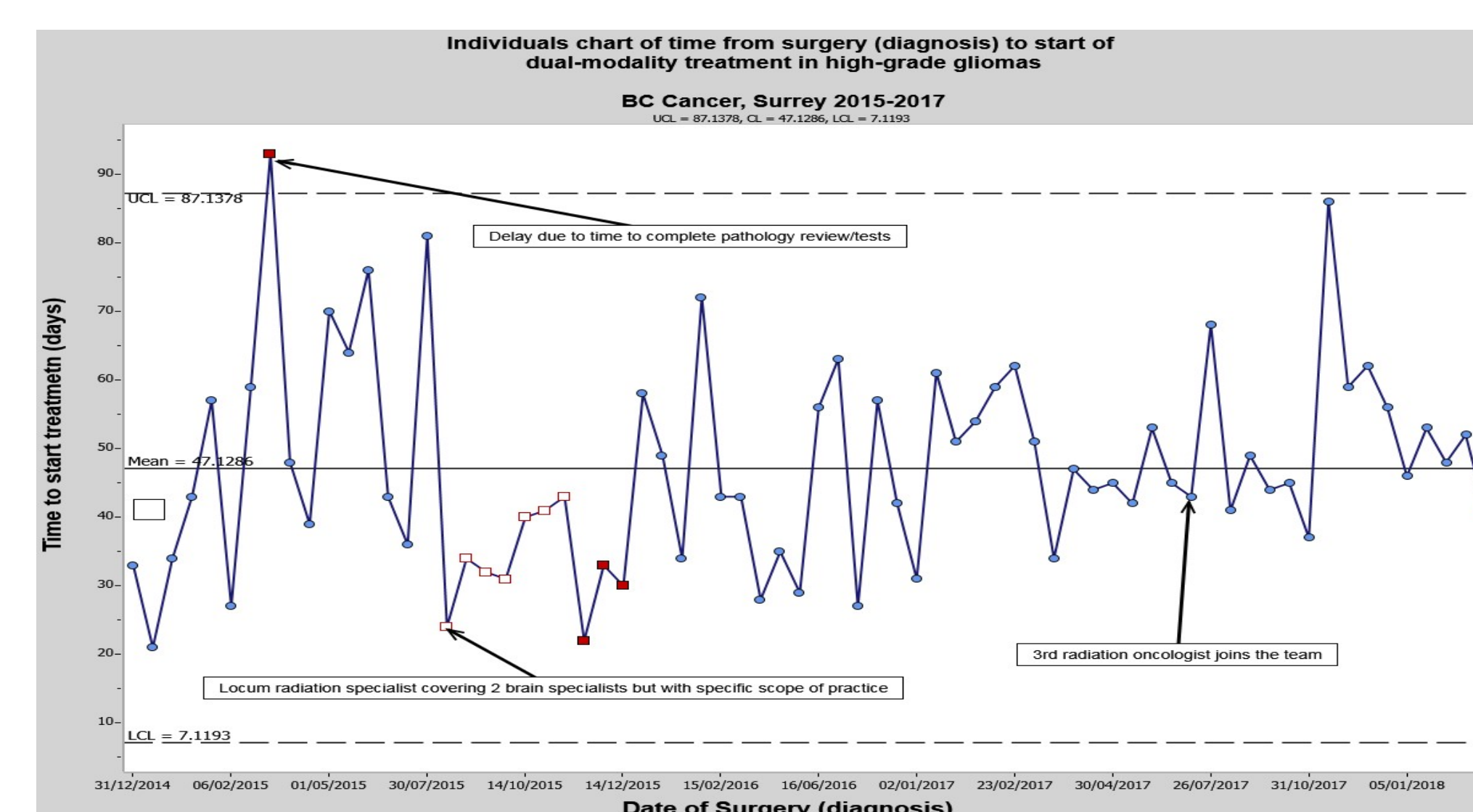


Fig. 3: New process flow diagram changes are marked with red star

## Results

- 2015-2017 median time to start of dual-modality treatment 44 days, mean= 47 days (Graph 1)
- **Special cause** was observed when a locum was on staff with a limited scope of practice
- Post operative MRI used for radiation plan, completion mean = 14 days (Graph 2)
- May 4<sup>th</sup> 2018: start of new dual-modality clinic and we continue to collect data prospectively



## Lessons Learned

- Importance of buy in from administration and peers to implement effective change
- Data on current state was helpful in strategically planning the change ideas:
  - We learned from special cause variation that "protected" slots may shorten referral-to consult time
  - Adding more resources without change to the process did not improve the outcome
- More to learn (PDSA cycles) once we collect measures after implementation of the new process