Possible effects of brain tumours and their treatment

### Cognitive
- Difficulties with:
  - Attention
  - Concentration
  - Memory
  - Learning
  - Communication (speech; understanding language/instructions; reading social cues)
  - Processing speed
- Problem-Solving
- Reasoning
- Planning
- Visual-spatial awareness

### Auditory
- Deafness
- Partial hearing loss

### Taste, appetite & digestion
- Nausea or vomiting
- Sore mouth
- Diarrhoea
- Constipation
- Heartburn
- Changes in taste/appetite
- Bowel & bladder problems (incontinence/double incontinence)

### Changes in appearance
- Hair loss
- Scars
- Weight gain or loss
- Puffiness of the face
- Water retention in hands & feet
- Central/PICC lines/portacath (tubes for delivering chemotherapy drugs that stay in place during course of treatment)
- Ommaya reservoir or shunt (device for removing excess fluid in the brain - visible bump on the head)
- Slow growth/short stature
- Delayed puberty
- Ommaya reservoir or shunt (device for removing excess fluid in the brain - visible bump on the head)

### General effects:
- **Lowered immunity**
  - Increased risk of infections, More severe forms of common, childhood illnesses e.g. chickenpox
- **Fatigue**
  - Extreme tiredness (physical & mental), Drowsiness, Lethargy, Sleep disturbance, Somnolence syndrome (excessive drowsiness that can occur 4-6 weeks after radiotherapy).
- **Behavioural effects**
  - Personality changes, Tantrums/anger/irritability, Anti-social behaviour, Impulsiveness, Heightened or inhibited sexual behaviour

### Endocrine changes
- Leading to:
  - Tiredness, Weight Gain, Depression, Growth impairment, Sensitivity to cold, Feeling thirsty, Needing to go to the toilet more often, Diabetes, Infertility, Erectile dysfunction

### Emotional effects
- Loss of self-confidence, Low self-esteem, Feelings of social isolation, Anxiety & 'scanxiety' (anxiety about scan results), Depression, Fear of tumour recurring, Fear of dying. (Effect on siblings/friends)

### Hydrocephalus
- (build-up of fluid in the brain)
- Leading to:
  - Headaches
  - Blurred vision
  - Being sick
  - Difficulty walking

### Visual
- Blindness/partial sight
- Cataracts
- Double vision
- Unco-ordinated eye movements
- Other visual defects e.g. blind spots

### Skin
- Rashes
- Changes in colour
- Skin thinning
- Increased sensitivity to sunlight
- Bruising

### Fine motor control
- Difficulties with:
  - Writing
  - Getting dressed

### Mobility
- Difficulties with:
  - Walking
  - Muscle wasting & cramps
  - Climbing stairs
  - Use of wheelchair or walking aids
  - Co-ordination
  - Balance
  - Difficulty making facial expressions

### Nerve damage
- Leading to:
  - Pain in extremities in cold weather
  - Difficulty making facial expressions

### Every young person is different and will experience different side-effects.

The side-effects will depend on the type and location of the tumour, the treatment received and the individual response.

One person will not have all these side-effects.

Some will be short-term; others may be long-term or delayed.