# Shortness of breath

## Interactive case based scenario & management discussion

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An Introduction to Acute Oncology

# What do we mean by breathlessness or dyspnoea?

How might patients describe the feeling?

- Unpleasant awareness of difficulty in breathing
- Pathological when ADLs affected +/- assoc with disabling anxiety
- May be described as
  - shortness of breath
  - a smothering feeling
  - inability to get enough air
  - suffocation

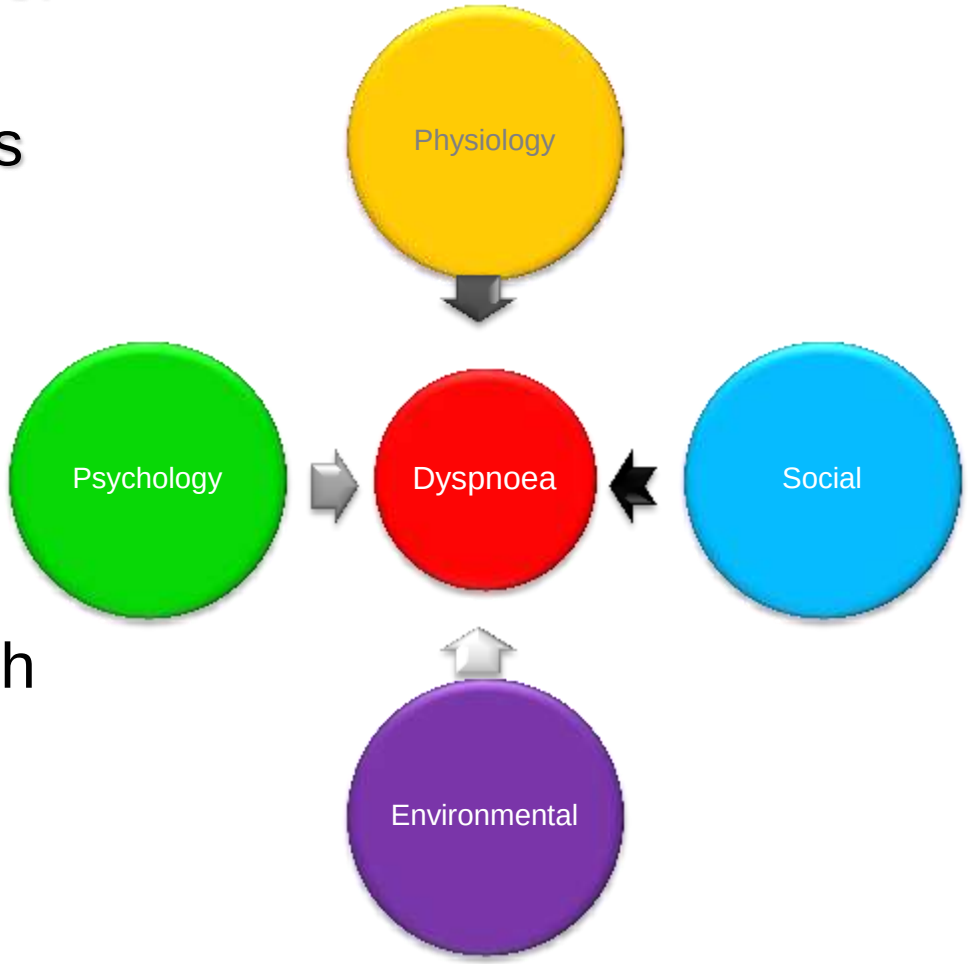


**Table 2** Descriptors

| | |
|---|---|
| 1. | My breath does not go in all the way. |
| 2. | My breathing requires effort. |
| 3. | I feel that I am smothering. |
| 4. | I feel a hunger for more air. |
| 5. | My breathing is heavy. |
| 6. | I cannot take a deep breath. |
| 7. | I feel out of breath. |
| 8. | My chest feels tight. |
| 9. | My breathing requires more work. |
| 10. | I feel that I am suffocating. |
| 11. | I feel that my breath stops. |
| 12. | I am gasping for breath. |
| 13. | My chest is constricted. |
| 14. | I feel that my breathing is rapid. |
| 15. | My breathing is shallow. |
| 16. | I feel that I am breathing more. |
| 17. | I cannot get enough air. |
| 18. | My breath does not go out all the way. |
| 19. | My breathing requires more concentration. |

*Source*: From Simon et al. (1989).

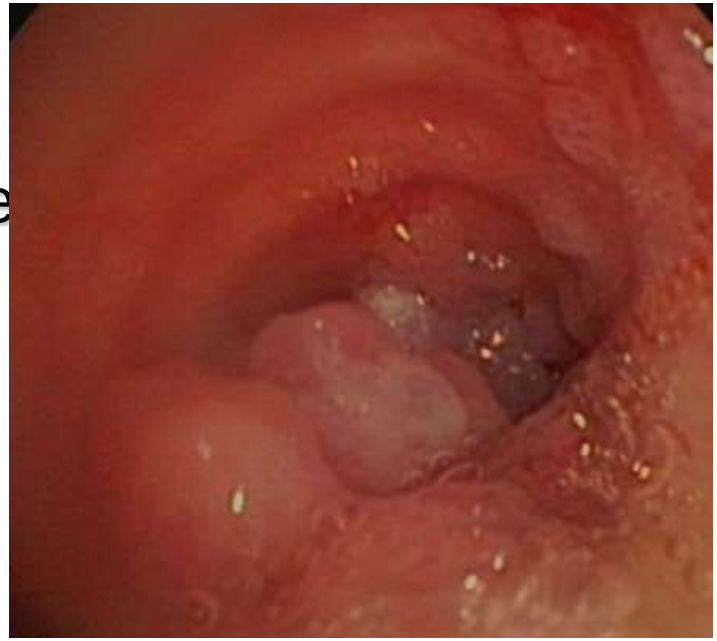
*Simon PM et al Am Rev Respir Dis 1989;140:1021*

# What are the possible causes in a cancer patient?

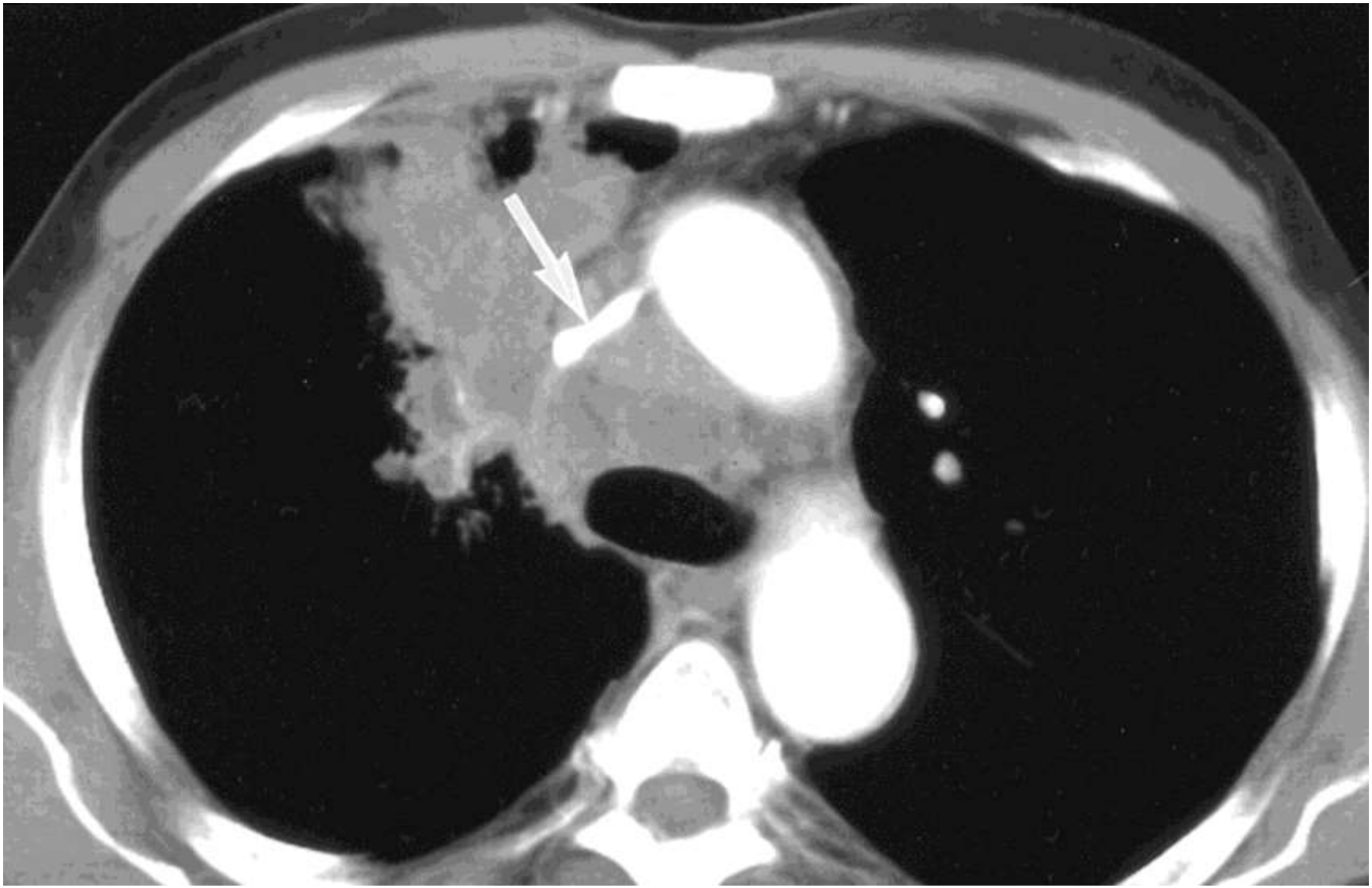
# Causes:

1. Due to the cancer
   - Direct
   - Indirect
2. Due to treatment of the cancer
3. Co-existing medical conditions

# Direct effects of the cancer

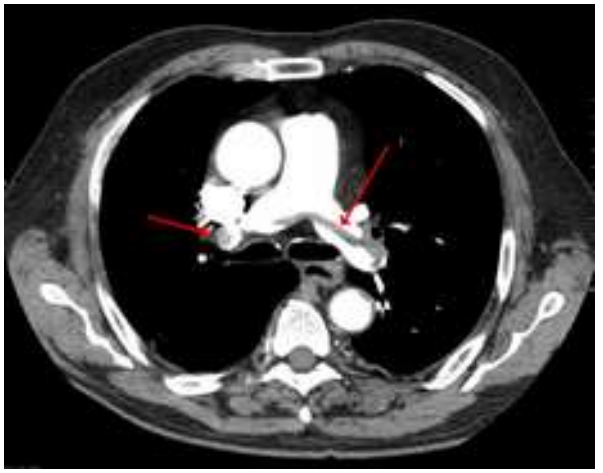


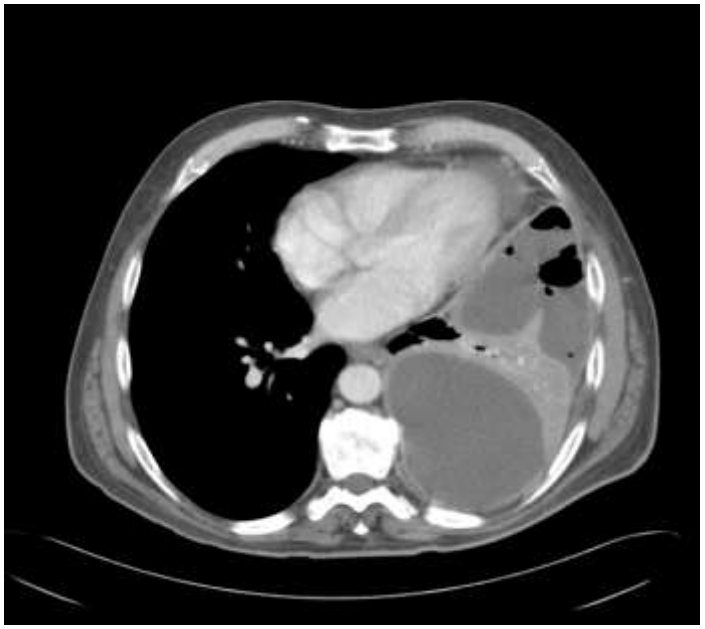
- Pleural effusion
- Large airway obstruction
- Replacement of lung by cance
- Lymphangitis carcinomatosis
- Tumour cell micro emboli
- Pericardial Effusion
- Phrenic nerve palsy
- SVC obstruction
- Massive ascites
- Abdominal distension
- Cachexia-anorexia syndrome respiratory muscle weakness.
- Chest infection



# Indirect effects from the cancer

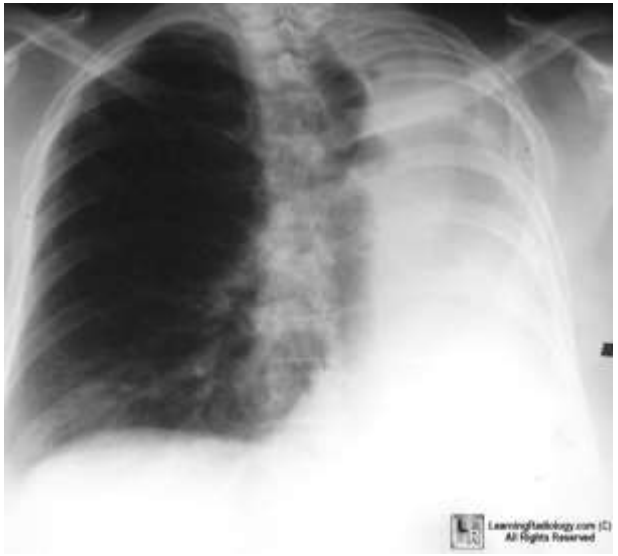
1. Atelectasis
2. Anaemia
3. PE
4. Pneumonia
5. Empyema
6. Muscle weakness

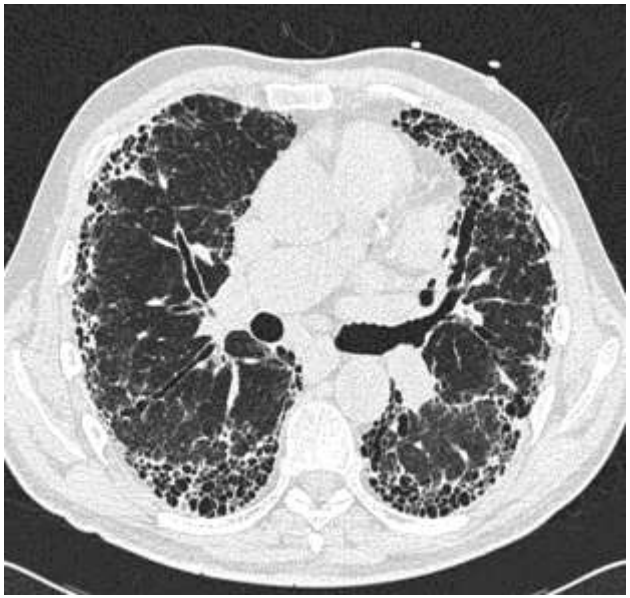




# Causes due to cancer treatment

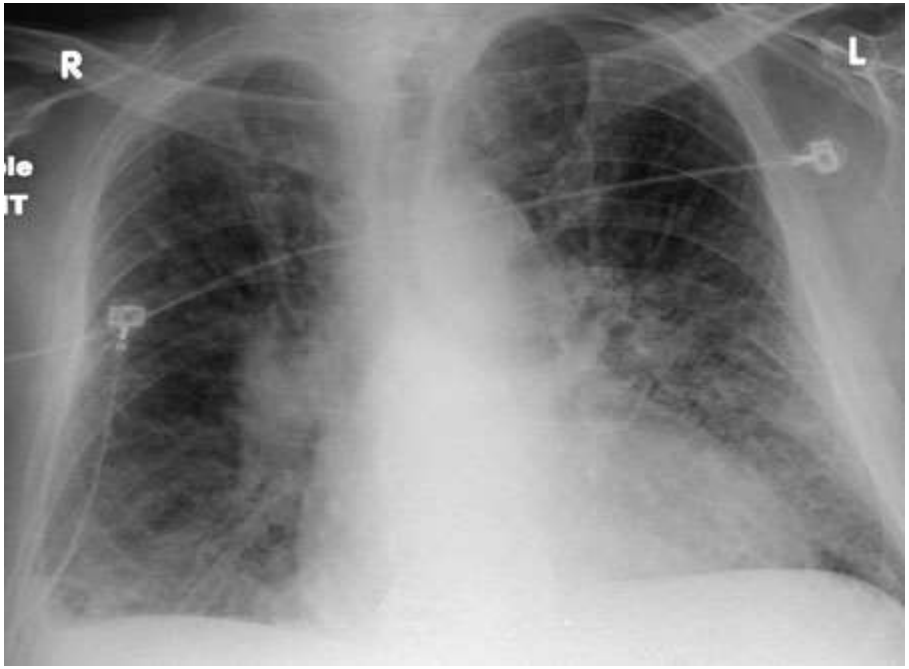
- Pneumonectomy
- Radiation induced fibrosis
- Chemotherapy induced
  - Pneumonitis
  - Fibrositis
  - Cardiomyopathy





# Co-existing medical conditions

1. COPD
2. Asthma
3. Heart Failure
4. Acidosis
5. Fever
6. Pneumothorax
7. Panic disorder, anxiety, depression



# Breathlessness Cycle

# Management of breathlessness

**What are the key strategies available?**

# Management

A. Non pharmacological
B. Pharmacological

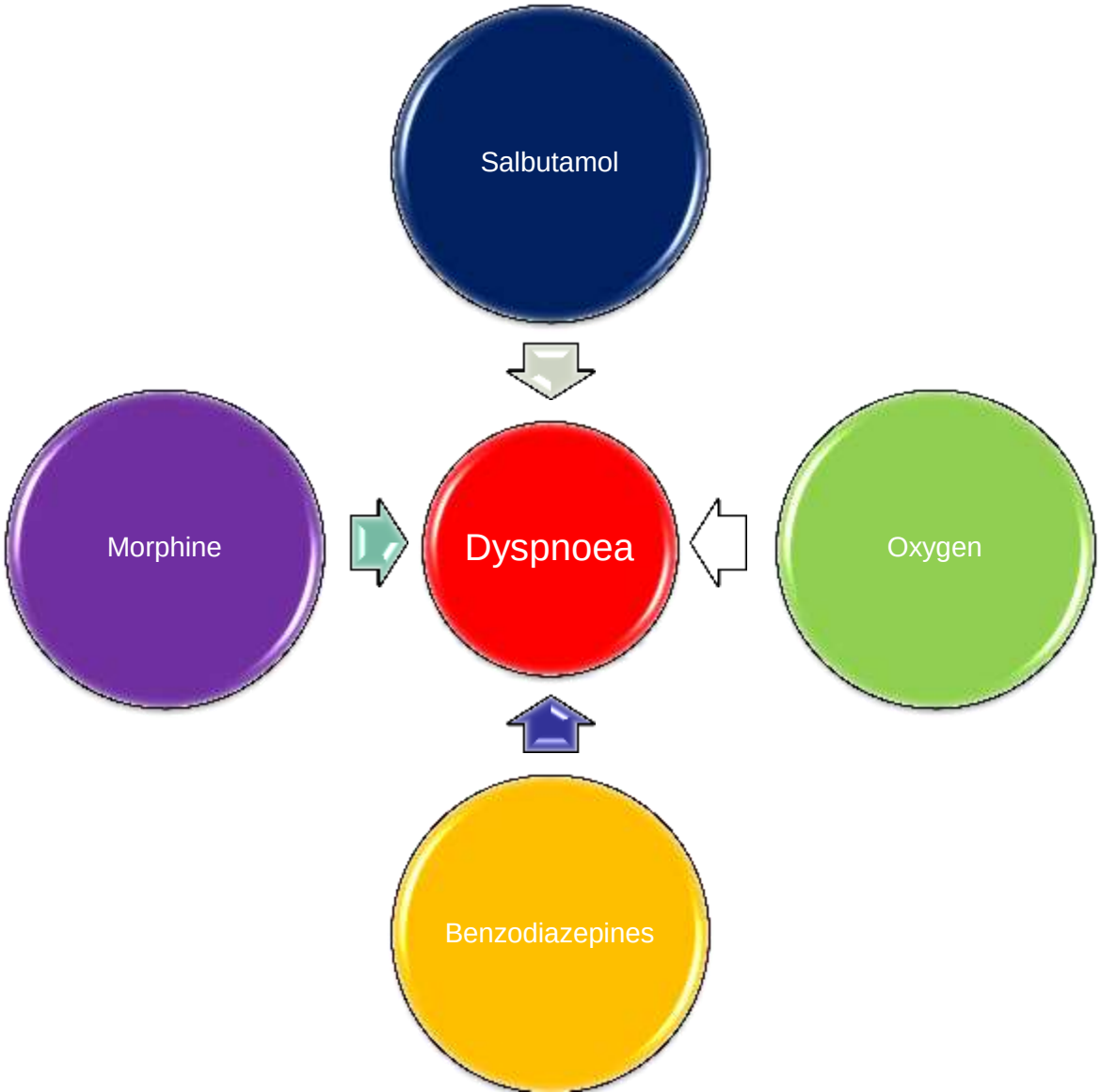
# Non-Drug Therapies

1. Explore perception of patient & carers
2. Maximise the feeling of control
3. Maximise functional ability
4. Reduce feelings of personal & social isolation
5. Encourage exertion to breathlessness to improve tolerance/desensitise to breathlessness
6. Evaluation by physios/OT's/SW to target support to need

# Maximize control

- Breathing control advice
  - Diaphragmatic breathing
  - Pursed lips breathing
- Relaxation techniques
- Plan of action for acute episodes
  - Written instructions step by step
  - Increased confidence coping
- Electric fan
- Complementary therapies

# Drug Treatment



1. **Bronchodilators**
   - work well in COPD and Asthma

2. **Oxygen**
   - increases alveolar oxygen tension
   - decreases the work of breathing to maintain an arterial tension
   - Beware in COPD/Hypercapnic Resp. failure

3. **Opioids**
   - reduce the ventilatory response to increased $CO_2$, decrease $O_2$ and exercise
   - hence decreases respiratory effort and breathlessness

   a. If morphine naïve -start with stat dose of **Oramorph 2.5-5mg** or **Diamorphine 2.5-5mg** sc and titrate Repeated 4hrly as needed.
   b. If on morphine already for pain a dose 100% or > of q4h dose may be needed, if less severe 25% q4h may be given

4. **Benzodiazipines**
   - stat dose of **Lorazepa**m 0.5mg SL, **Diazepam** 2-5mg or **Midazolam** 2.5-5mg sc Repeated 4hrly as needed

# Terminal Breathlessness

- Great fear of patients & relatives
- Treat appropriately
  - opioid e.g. dimorphine
  - sedative/anxiolytic e.g. midazolam
- If agitation or confusion -haloperidol or Nozinan
- Sedation not the aim but likely due to drugs and disease
- Death rattle due to secretions in hypopharynx moving with breathing
  - Patient rarely distressed
  - Family commonly are distressed
  - **Hyoscine Butylbromide (Buscopan)**
  - **Stat-20mg 1hrly**
  - **CSCI-80-120mg/24 hrs**