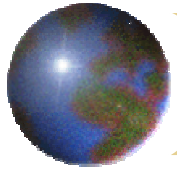
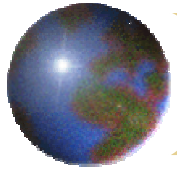


早期營養介入與積極營養支持對癌症治療之影響



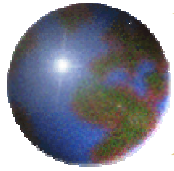
一、飲食與癌症的關係

- ✦ 不當的食物選擇，增加罹癌的風險
- ✦ 不當烹調所產生的致癌物質



二、癌症對營養狀況之影響

- 腫瘤本身
- 癌症治療的副作用
- 接近50%腫瘤患者發生癌症惡病質



三、營養狀況對癌症治療之影響

✦ 存活率下降

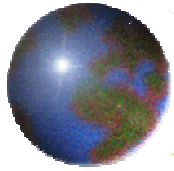
ECOG的探討發現，未喪失體重的腫瘤患者其存活率為兩倍。

Scott C et al., 1997

✦ 對治療的耐受力變差

159位病患，66% vs 8% 合併症

Smale BF et al., 1981



三、營養狀況對癌症治療之影響

✦ 術後的併發症增加

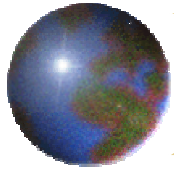
較長的住院天數，5.8天 vs 13.4天

Ottery FD, 1995

✦ 生命的品質下降

體重減輕造成持續的病勢感和死亡的陰影

Tchekmedyan NS, 1999



四、營養評估

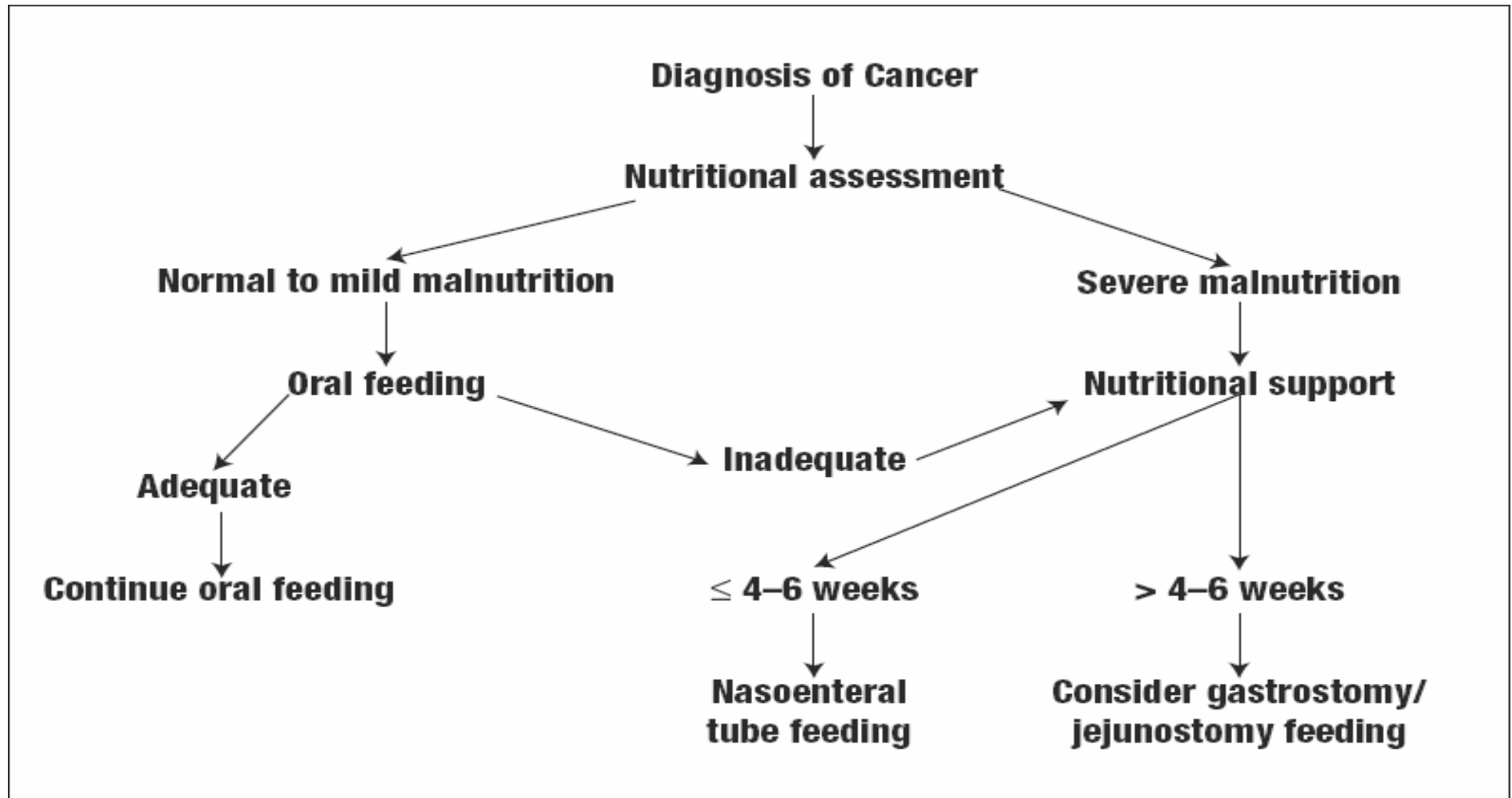
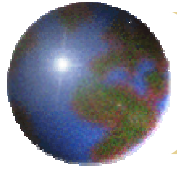


Figure. Indications for enteral feeding. Adapted with permission from Gentilini et al.⁷⁴



四、營養評估

❖ Patient Generated Subjective Global Assessment (PG-SGA)

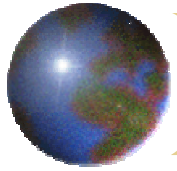
1.WEIGHT

2.FOOD INTAKE

3.SYMPTOM MANAGEMENT

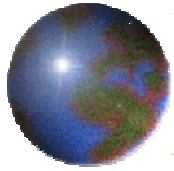
4.ACTIVITY AND FUNCTION

Ottery FD, 1994; 1998



四、營養評估

- ✦ **Patient Generated Subjective Global Assessment (PG-SGA)**
 1. Disease or condition
 2. Metabolic stress
 3. Physical examination: fat stores, muscle status, fluid status



五、營養支持原則

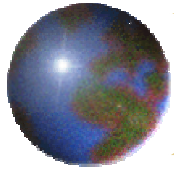
- ✦ 預防與治療營養不良
- ✦ 開始於癌症治療的初期，並在全程癌症治療中監測

符合個別的需求

積極治療者：以增加存活率為最終目標

接受舒減性療法者：以改善生活品質為最高目標

- ✦ 以均衡飲食為原則，依臨床症狀訂出進食策略



癌症治療造成之臨床現象

食慾不振

腹瀉

味覺改變

體重下降

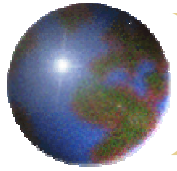
便秘

進食困難

黏膜炎

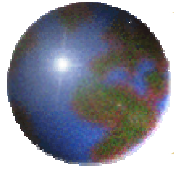
噁心嘔吐

體重下降不只是臨床症狀，也是營養障礙呈現之結果！



營養照護

- ✿ 經口進食
 1. 進食量有限時，使用體積小、熱量密度高、少量多餐的供應方式；必要時使用**營養補充品**
 2. 食物口味清淡、不油膩，酸、甜、鹹度、質地等，**依臨床症狀表現而加以調整**
 3. 富含纖維素的食物攝取**依臨床症狀表現**，做種類及量的改變



Glutamine Clinical Applications

GI Support

Short Bowel Syndrome

Inflammatory Bowel Disease

Anastomosis Support

Infectious Enteritis

Oncology

Diarrhea

Radiation Side Effects

Chemotherapy Side Effects

Bone Marrow Transplantation

HIV/AIDS

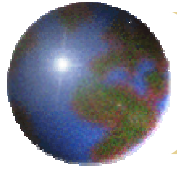
Diarrhea

Muscle Maintenance
and Repletion

Critical illness & Recovery

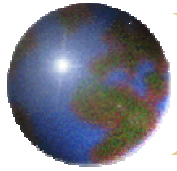
Burn/ Trauma/ Sepsis

Non-Healing Pressure ulcers



Glutamine Characteristics

- ✦ Glutamine, basically tasteless, works best in powdered form when taken two or three times daily.
- ✦ 0.57 g/kg/d has become a reference enteral dose.



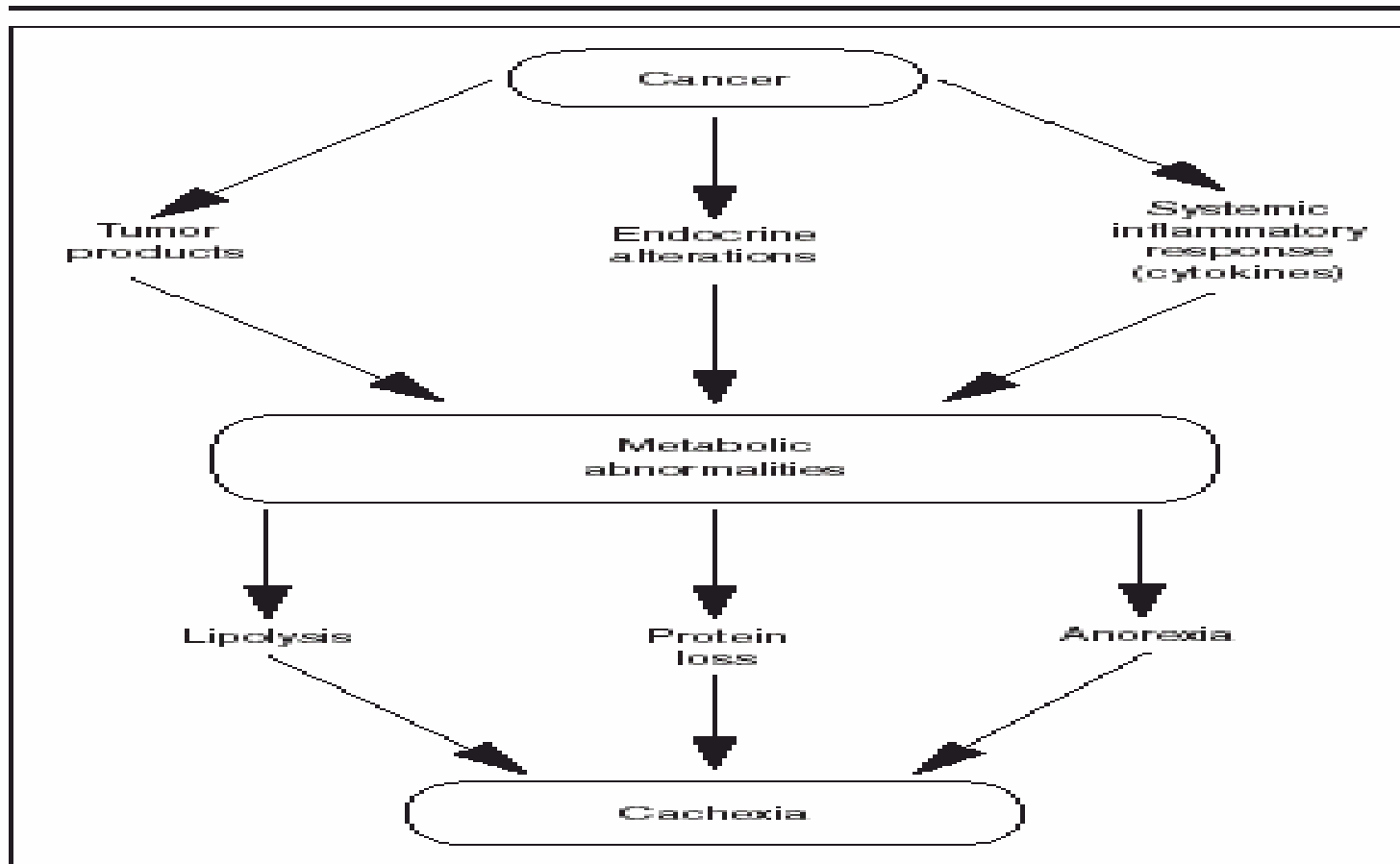
癌症惡病質

- ❖ 補充熱量卻無法增加肌肉組織（特別是骨骼肌肉）的現象在研究中重複出現。

Popp MB, 1981; Kotler DP, 1990; Plank LD, 1998

Pathophysiology of cachexia

Figure 1. Different factors contributing to cancer cachexia



Cancer cachexia is a complex pathological condition characterized by many metabolic changes involving numerous organs. These changes are triggered by alterations in the hormonal milieu, release of different tumor factors and a systemic inflammatory reaction characterized by cytokine production and release.

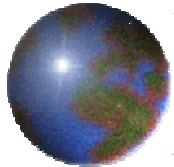
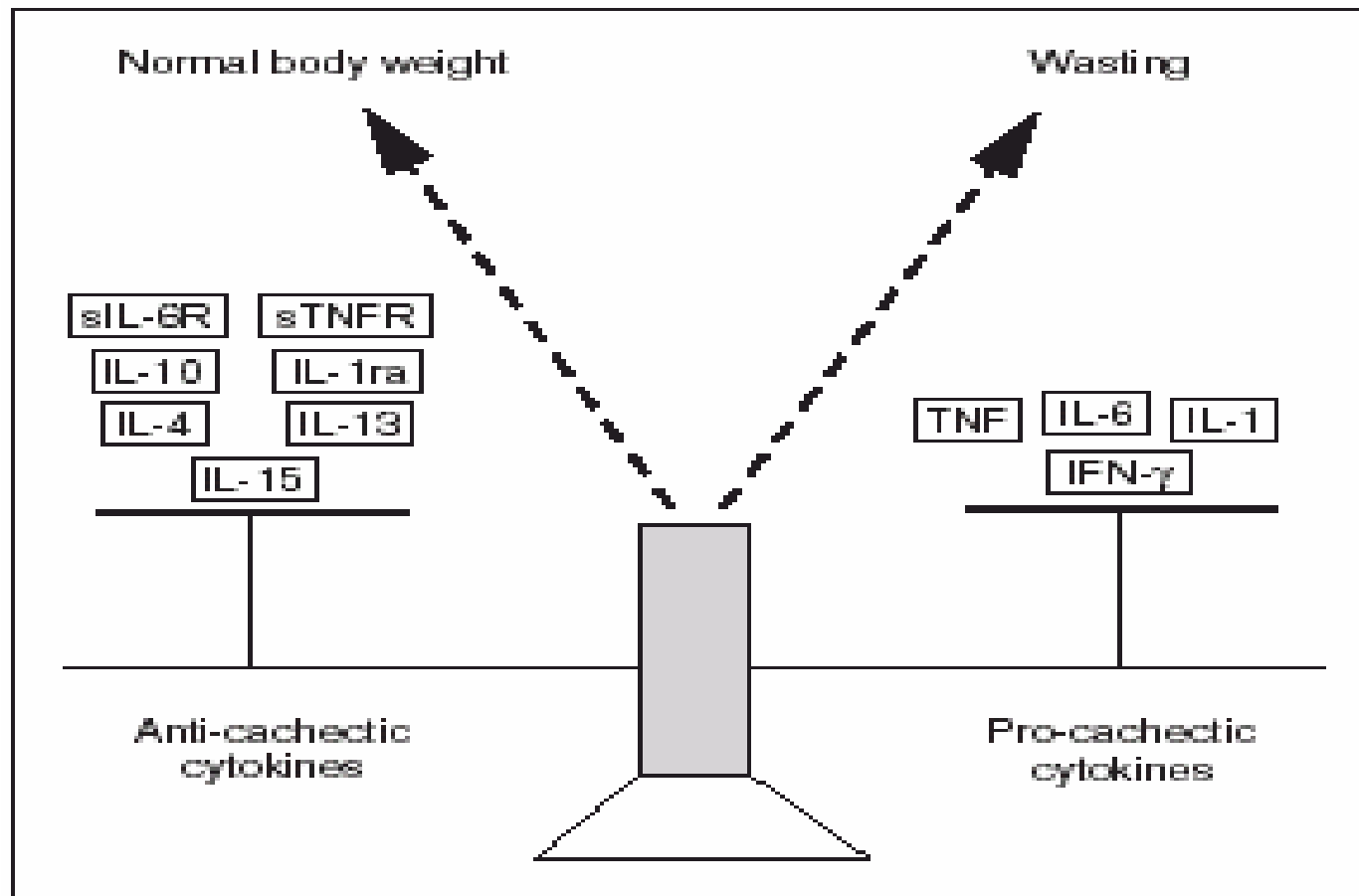
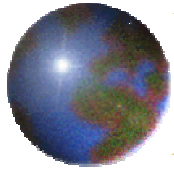


Figure 2. Cytokines and cachexia



The balance between proinflammatory (procachectic) cytokines, their soluble receptors and the antiinflammatory (anticachectic) cytokines plays a key role in the development of the cachectic syndrome. IL-1ra, IL-1 receptor antagonist; TNF, tumor necrosis factor- α .



癌症惡病質

- ✦ Forbes的研究顯示，體重改變的組成分，受改變前身體組成之影響。

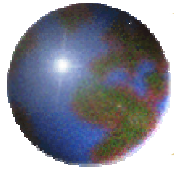
Nutr Rev.45: 225-231, 1987

- ✦ Moore的研究顯示，發生癌症惡病質的腫瘤患者，其身體之脂肪和肌肉約等比喪失，但細胞外水量維持不變。

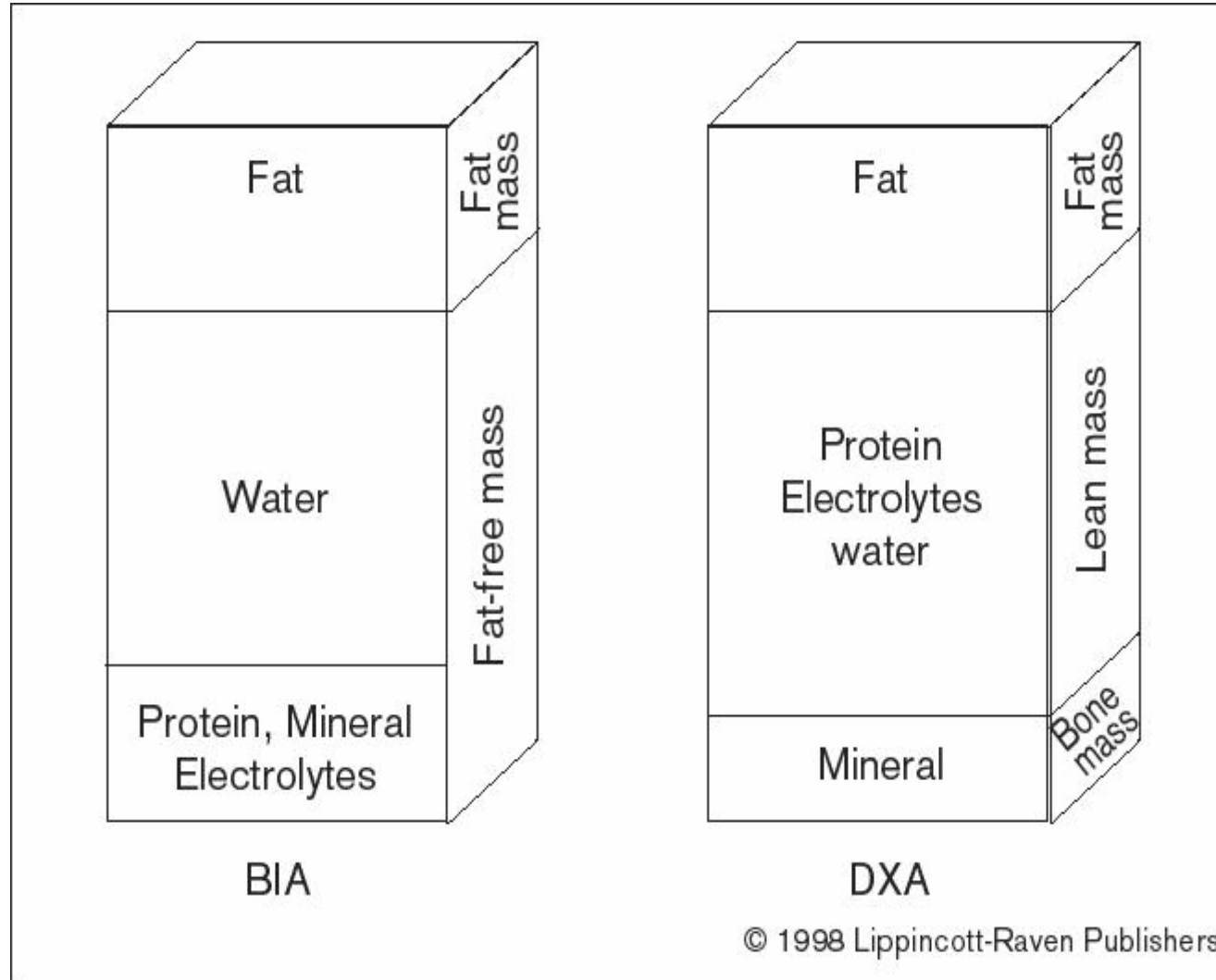
WB Saunders, 1963

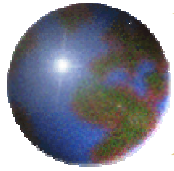
EPA Clinical Studies

Study	Design	Results
Wigmore et al: <i>Nutrition</i> 1996;12:27.	Pancreatic cancer, 2.2 g EPA, 12 weeks; 2.9 kg/mo wt loss prior to supplementation	Weight stabilization
Wigmore et al: <i>Nutr Cancer</i> 2000;36:177.	Pancreatic cancer, 6 g EPA/day, 12 weeks; 2.0 kg/mo wt loss prior to supplementation	Weight stabilization
Bruera et al: <i>J Clin Oncol</i> 2003;21:129.	Mixed tumor types, 1.8 g EPA/day, 2 weeks; >5% wt loss prior to supplementation	Weight stabilization



Body Composition Analysis





體重追蹤分析—身體組成分析儀

- ✦ 評估體重增加之真正內涵
- ✦ 肌肉質量增加才是體重回升的關鍵點
- ✦ 運用科技儀器定期追蹤肌肉質量變化，
以確認營養策略對患者有利

