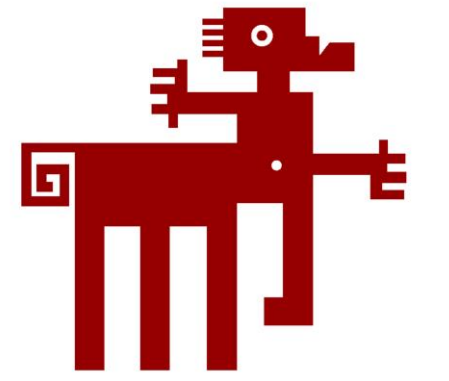


POSTOPERATIVE COGNITIVE DYSFUNCTION: WHAT CAN WE DO TO IMPROVE ITS OUTCOME?



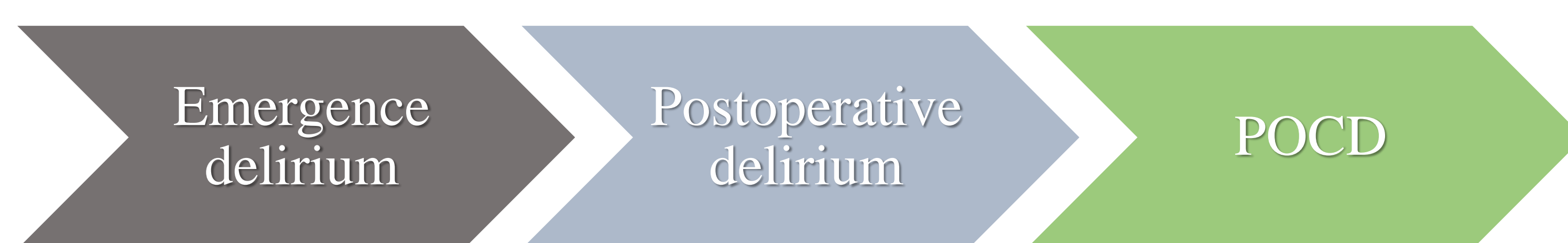
INTRODUCTION

- Postoperative cognitive dysfunction (POCD) is a clinical syndrome characterized by alterations in memory, concentration, attention, and social integration after the use of anesthesia and surgery that persists after three months.
- This condition is very common in geriatric patients, being the advanced age the most important risk factor of POCD.

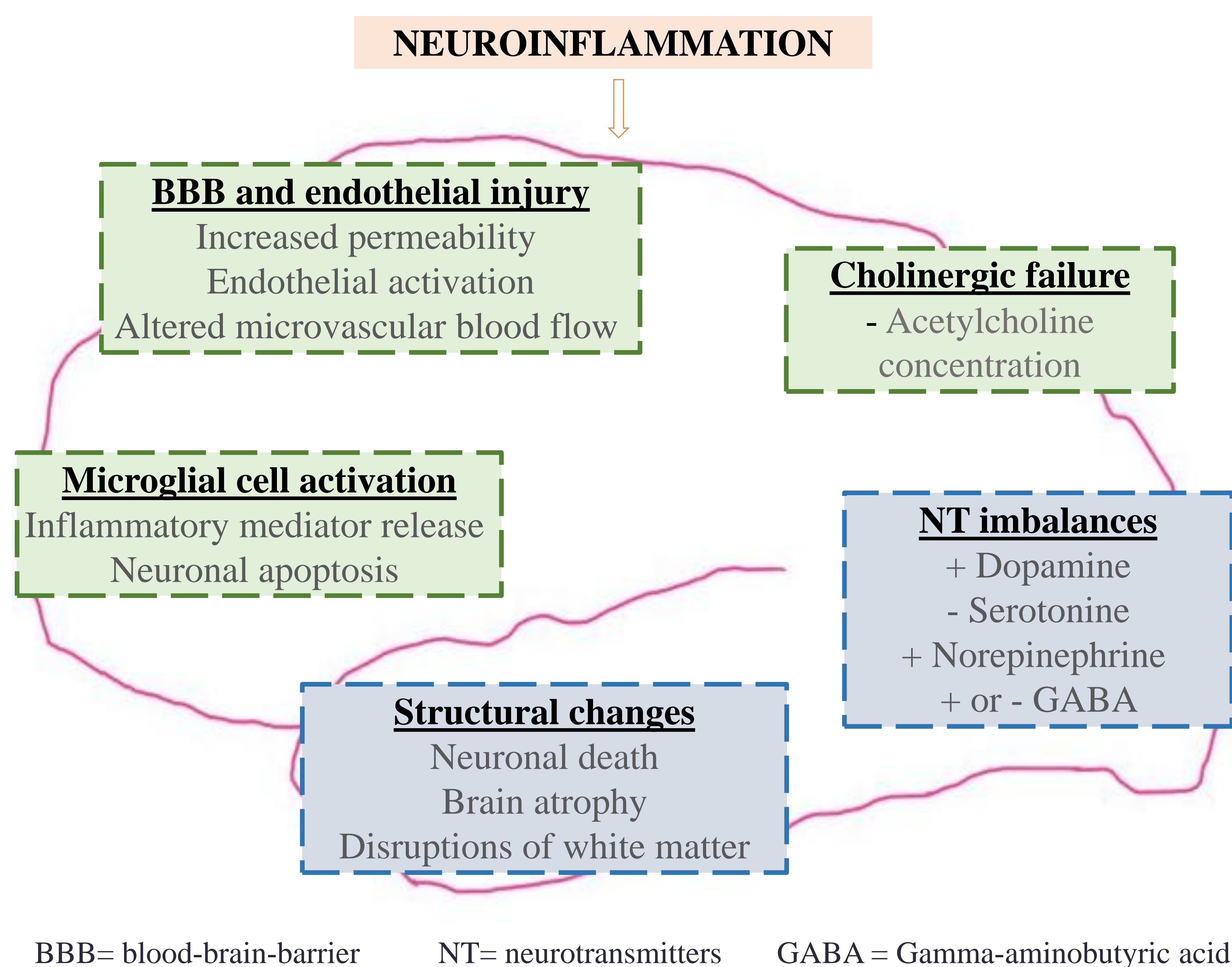
OBJECTIVES

- To review all the important literature published about POCD.
- To summarize the important information about this condition, including its predisposing factors and medical options to prevent its development or to treat it once established.

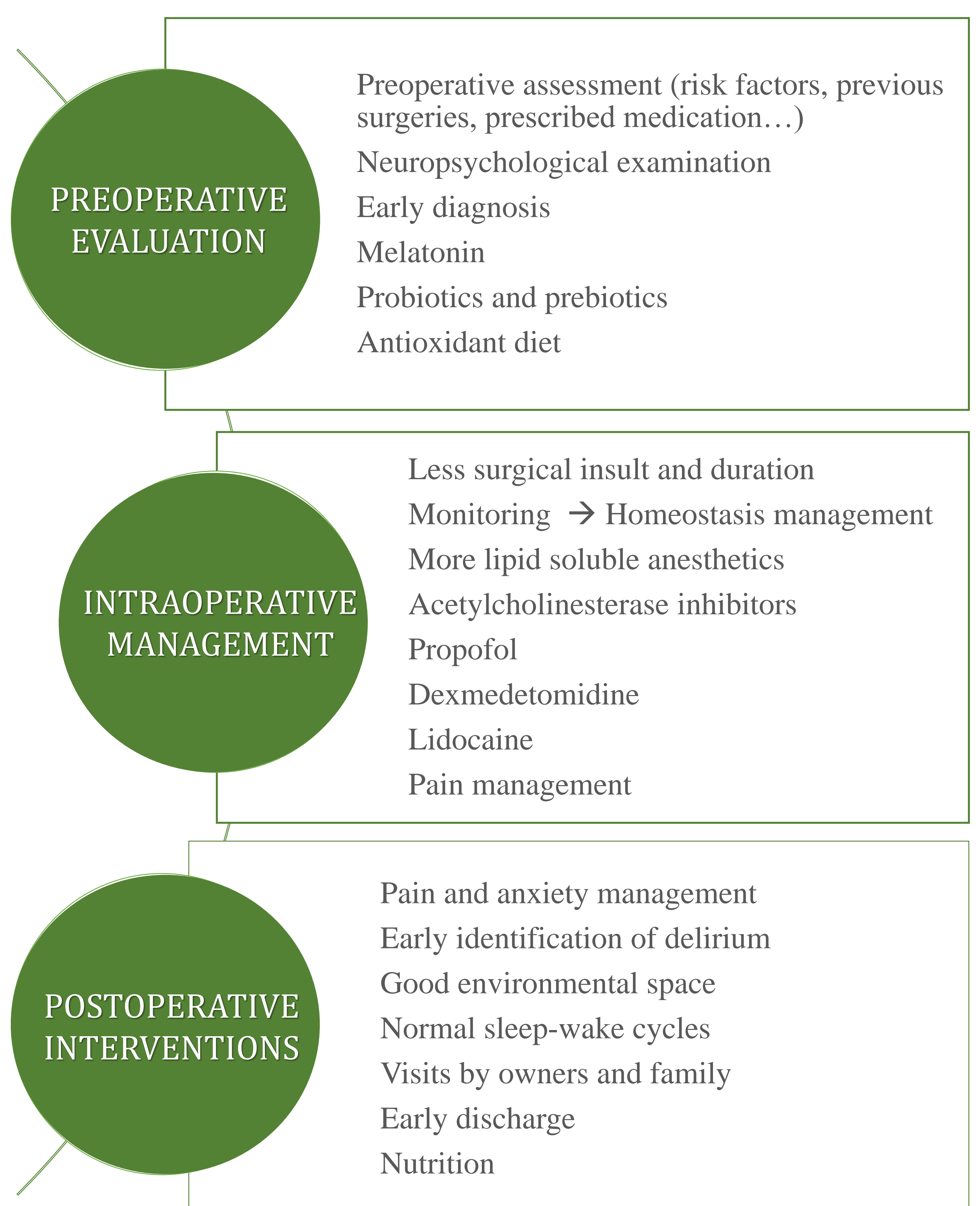
POSTOPERATIVE COGNITIVE DISORDERS



ETIOLOGY OF POCD



PREVENTIVE STRATEGIES



RISK FACTORS

PATIENT	SURGERY
<ul style="list-style-type: none">Advanced agePrevious cognitive dysfunctionPreexisting cerebral, cardiac, or vascular diseasesLow educational level	<ul style="list-style-type: none">Major/minor surgeryExtensive surgical procedureComplications
ANESTHESIA	
<ul style="list-style-type: none">Long acting anestheticsAnticholinergic drugsDisturbance of homeostasisPerioperative painAnesthesiologic complicationsOther postoperative cognitive alterations after surgery	

CONCLUSIONS

- Hypothesized mechanisms of POCD include BBB and endothelial injury, cholinergic inhibition and neuroinflammation with microglial activation which lead to neurotransmitter imbalance and structural changes.
- The main risk factor for POCD is the age of the patients and their cognitive status prior to surgery, although surgical and anesthetic factors need to be considered.
- Prevention is essential as there is no effective POCD treatment and it worsens the quality of life being one of the principal causes of euthanasia geriatric animals.
- More studies are needed to improve knowledge on mechanisms and pathways, identification, management, prevention and treatment of POCD.