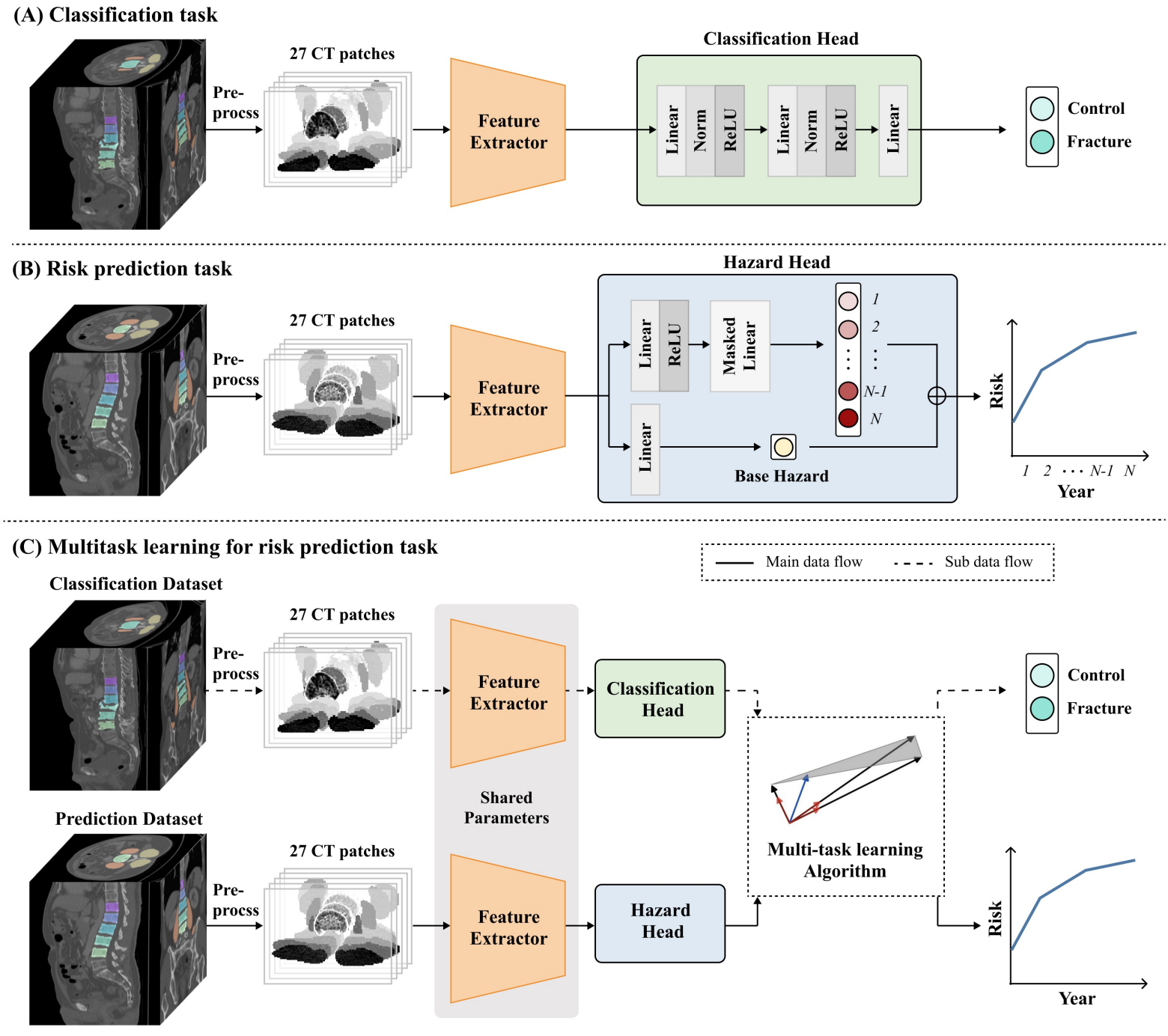
(A) Classification task
Pre-
procss
27 CT patches
Feature
Extractor
Classification Head
Linear
Norm
ReLU
Linear
Norm
ReLU
Linear
Control
Fracture
(B) Risk prediction task
Pre-
procss
27 CT patches
Feature
Extractor
Hazard Head
Linear
ReLU
Masked
Linear
Linear
1
2
N-1
N
Base Hazard
Risk
1 2 ··· N-1 N
Year
(C) Multitask learning for risk prediction task
Main data flow
Sub data flow
Classification Dataset
Pre-
procss
27 CT patches
Feature
Extractor
Classification
Head
Control
Fracture
Shared
Parameters
Prediction Dataset
Pre-
procss
27 CT patches
Feature
Extractor
Hazard
Head
Multi-task learning
Algorithm
Risk
Year