

IS3R 2023

Berlin/Germany

August 24–26, 2023

MRI

Where do we
go from here?

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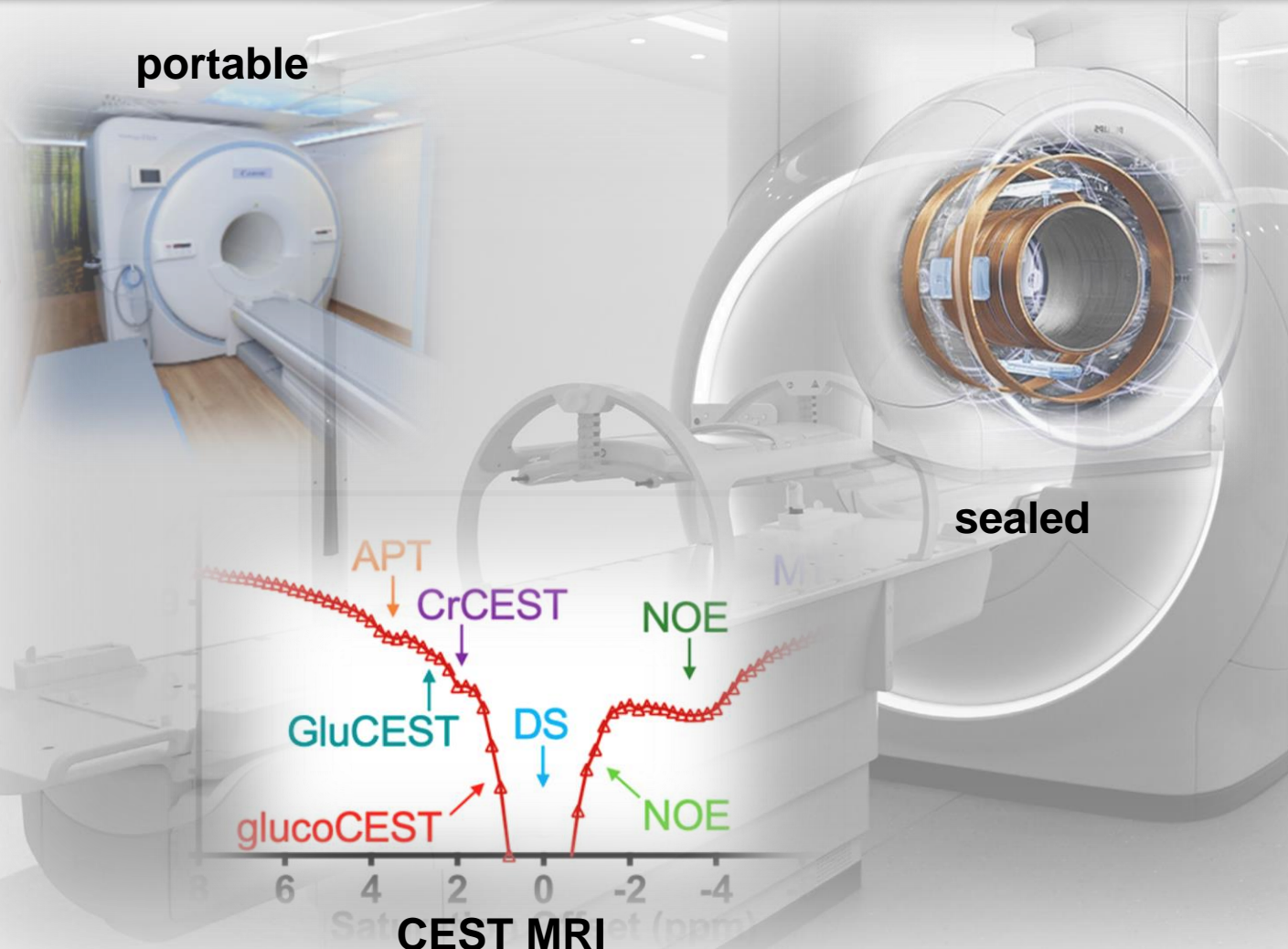
A large, modern MRI scanner is shown in a clean, brightly lit environment. The scanner's gantry is partially open, revealing the internal structure. The text 'Where do we go from here?' is overlaid in the center of the image.

Where do we go from here?

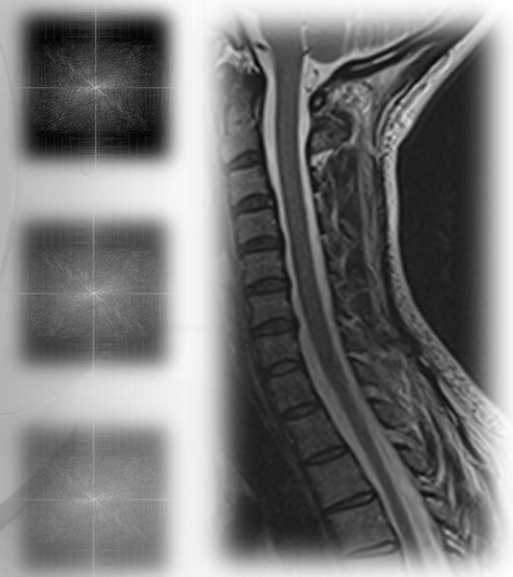
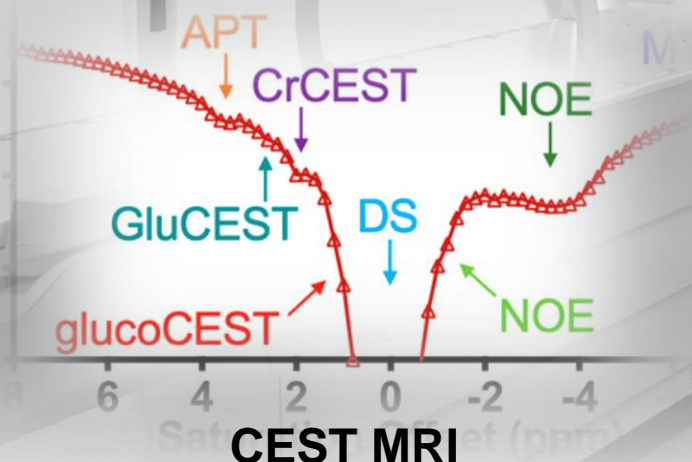
portable



low-field



sealed



Compressed sensing





Patterns in Data

Fill in the



blank gaps
hole

...

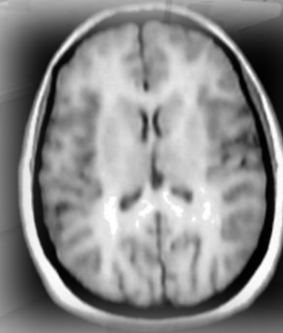
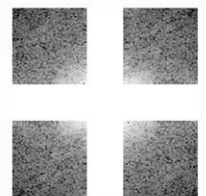
v0

v1

v2

```
function(e) {
  for (i in e)
    if (r = t.call(e[i], i, e[i]), r === 1)
      return e
}
trim: b && !b.call("\uffu00a0") ? function(e) {
  return null == e ? "" : b.call(e)
} : function(e) {
  return null == e ? "" : (e + "").replace(C, "")
}
makeArray: function(e, t) {
  var n = t || [];
  return null != e && (Object(e)) ? n.merge(e) : n
}
isArray: function(e, t, n) {
  var r = t || 0;
  if (r > 0)
    for (; r > 0; r--)
      if (e[r] != null)
        return !0
  return !0
}
```

Initial
training



```
function(e) {
  for (i in e)
    if (r = t.call(e[i], i, e[i]), r === 1)
      return e
}
trim: b && !b.call("\uffu00a0") ? function(e) {
  return null == e ? "" : b.call(e)
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  if (r > 0)
    for (; r > 0; r--)
      if (e[r] != null)
        return !0
  return !0
}
```

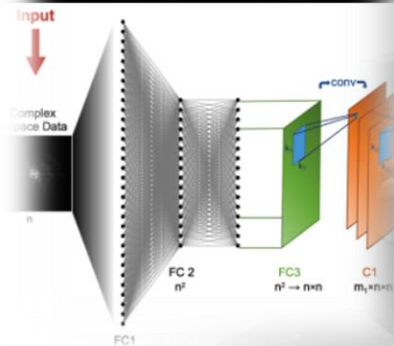
Koonjoo et al (2021)



Latent Information

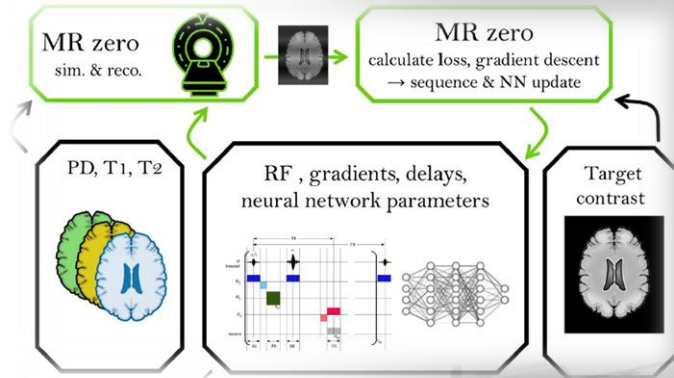


MR fingerprinting



Low-field DLR

Loktyushin et al (2021)



Sequence generation

Personalized Care

Dynamic protocols

Ordering

Communication

Protocol

Reporting

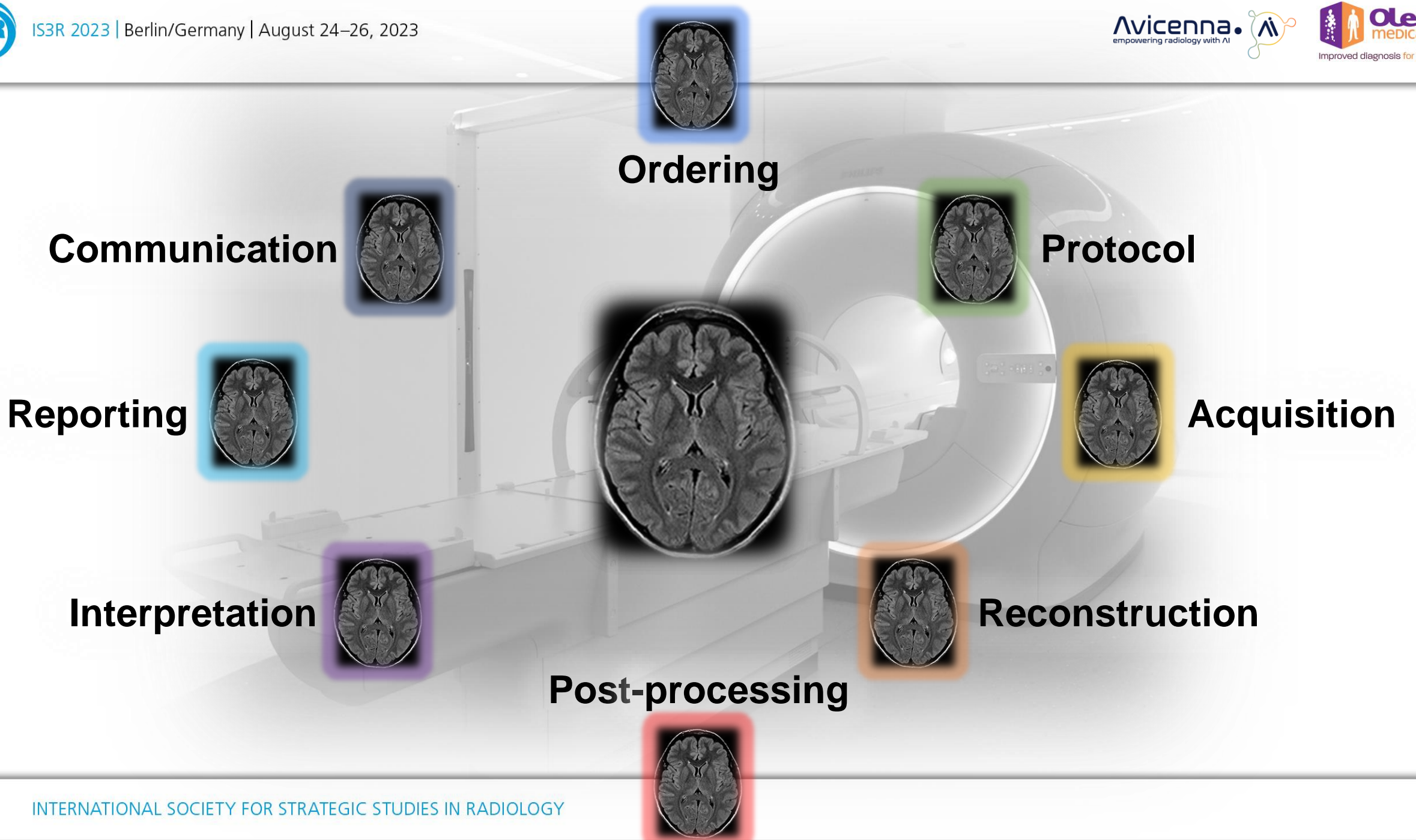
MRI as a Platform

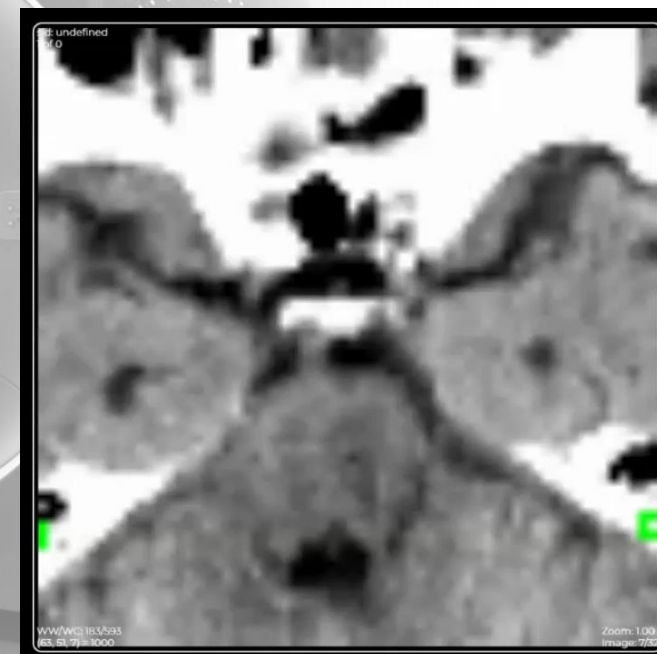
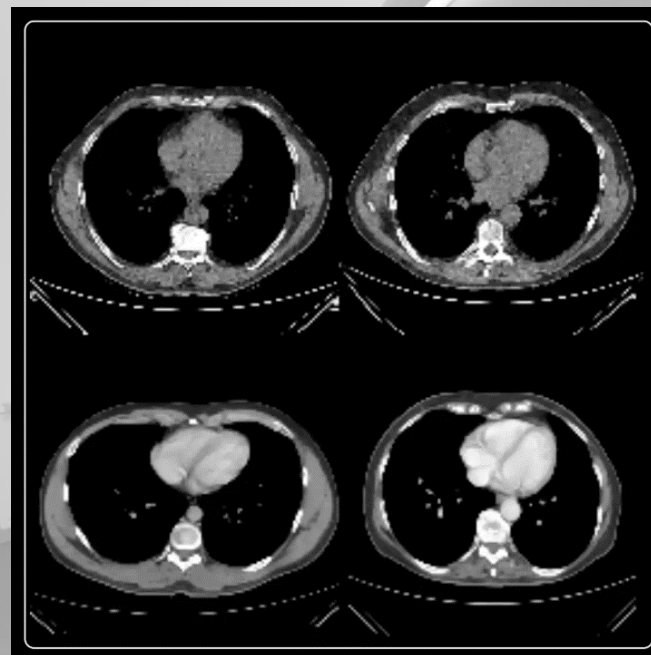
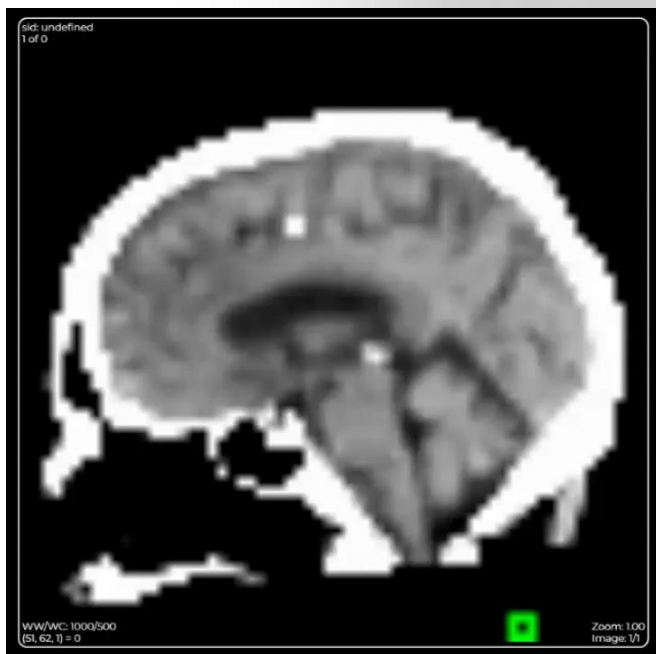
Acquisition

Interpretation

Reconstruction

Post-processing





A large, modern MRI scanner is shown in a clean, brightly lit environment. The scanner is a large, cylindrical machine with a patient table extending from the front. The text 'Where do we go from here?' is overlaid in the center of the image.

Where do we go from here?