

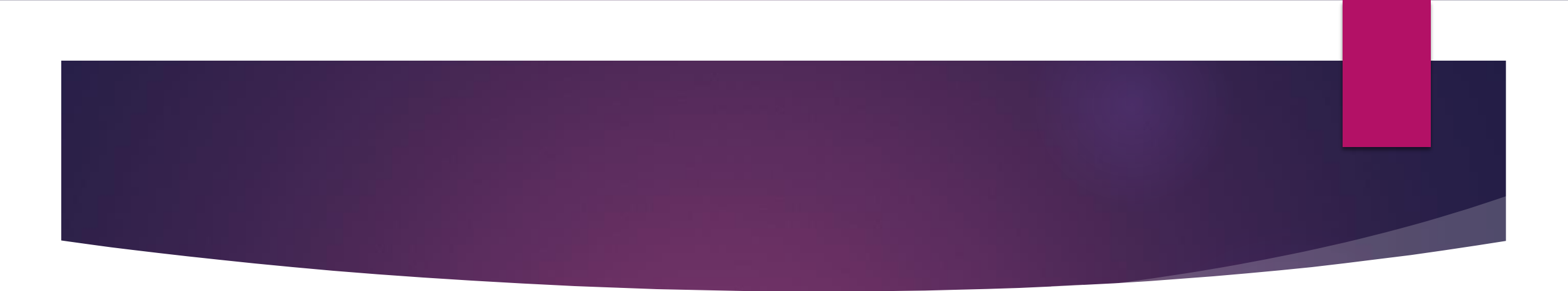
Covid-19 Dementia

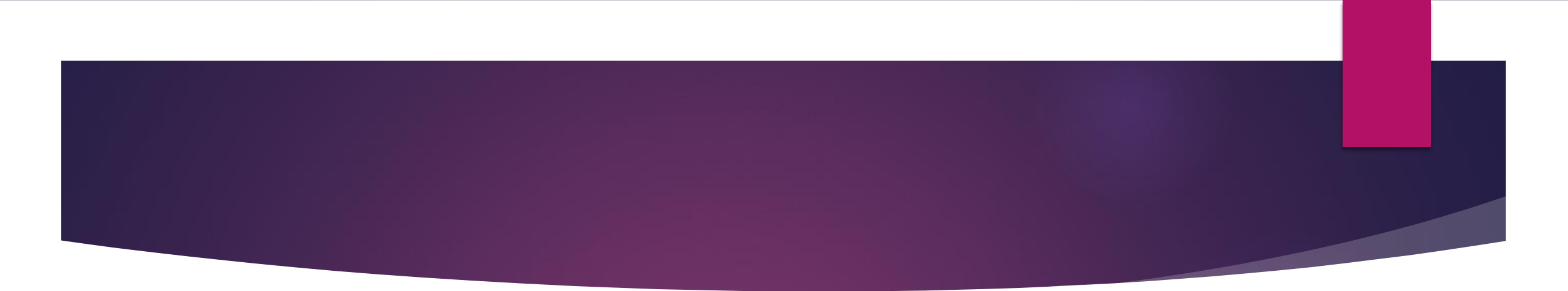
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TUMS

2021

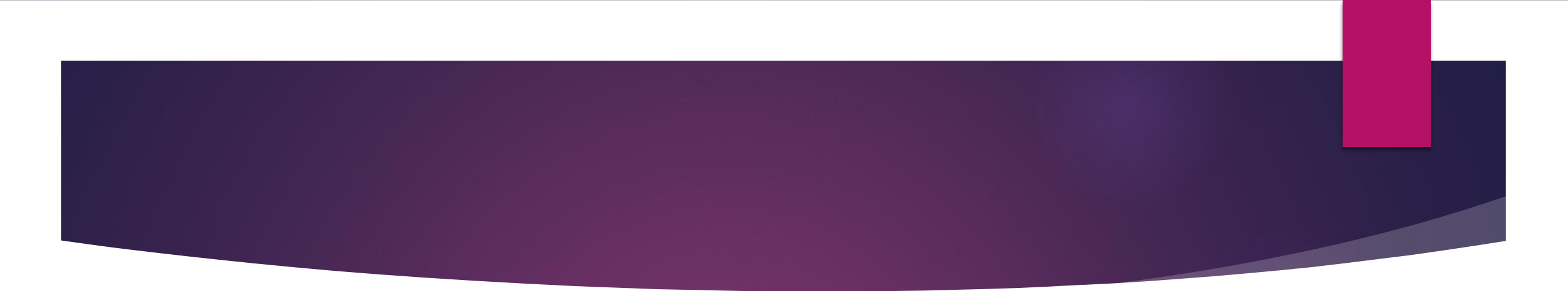
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- A 68 year old woman was coming with wandering , agitation and whine From 3 to 4 months ago
 - She had been admitted 3 months ago in psychosomatic ward and holistic work up was down
 - Her symptoms have been started from 2 years ago with depression and insomnia because of her husband disease.
 - After he died , her reaction was not normal and her family said she was apathetic

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- She didn't use mask , and all the time she was wandering in clinic
 - After admission for diagnostic work up , she have got diarrhea and dyspnea
 - After 72 hours she died
 - Covid-19 PCR was positive

No cough

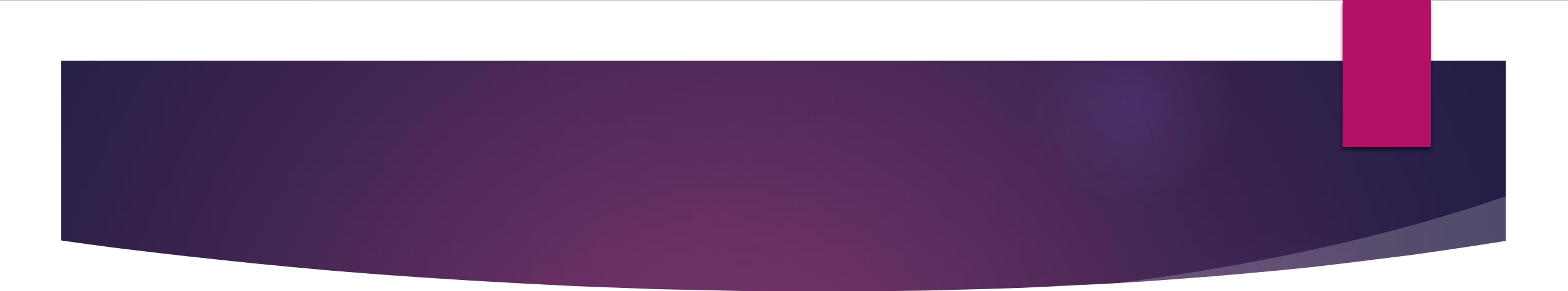
No fever

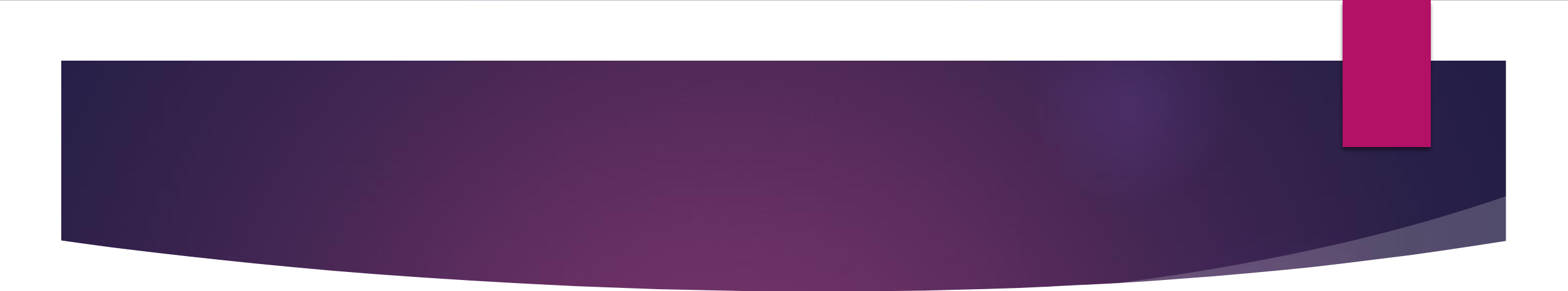
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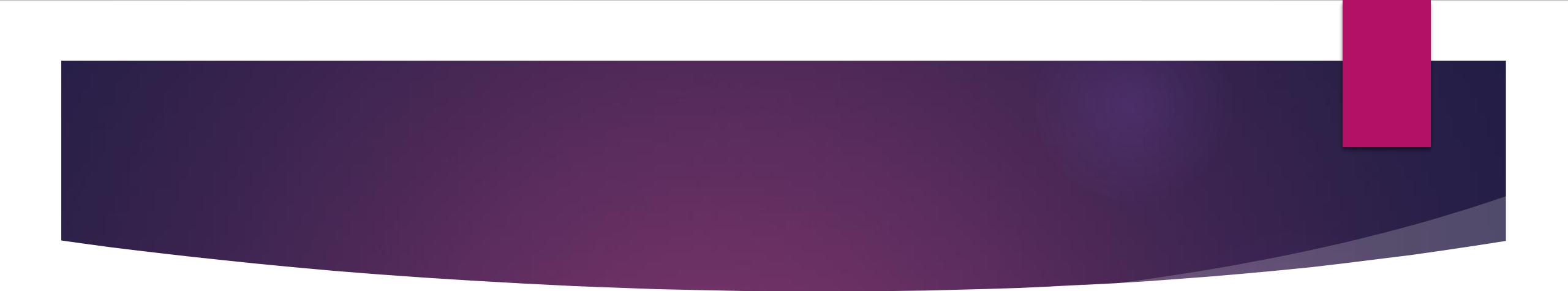
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- 73 years old man with dementia and parkinsonism and covid-19 infection
 - Recent agitation and aggression treatment with antipsychotic

ASSOCIATIONS AMONG DEMENTIA, OLD AGE, AND COVID-19

- People with dementia are vulnerable to being infected :
 1. Not adequately comprehend, execute, or recall
 2. Agitation, wandering, or disinhibition
 3. Physical distancing is not feasible
 4. Residing at care homes

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- Older people who are infected may present with nonspecific symptoms:
 - Altered general activity, falls, or delirium **without** the typical COVID-19 symptoms

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- About 20% to 40% of COVID-19 cases have been people older than 65 years
 - Mortality Rate : 14.8% in China, to 25.5% in Korea, to as high as 41.8% for males (21.6% for females) in Italy (80 years or older)

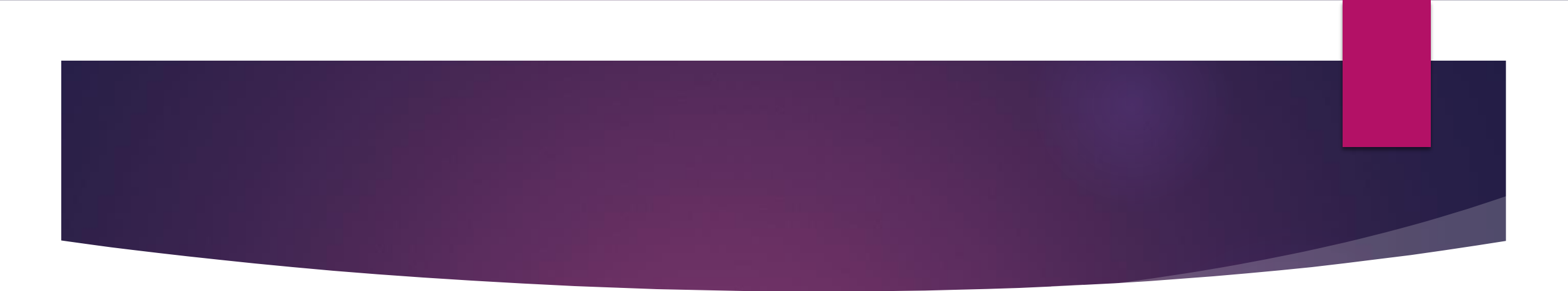
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- In the UK , 80 years or older were associated with a 12-fold risk increase in mortality compared to those ages 50 to 59 years
 - Mortality was associated with pre-existing dementia/stroke
 - UK :pre-existing dementia , homozygous ApoE4 genotype , severe COVID-19

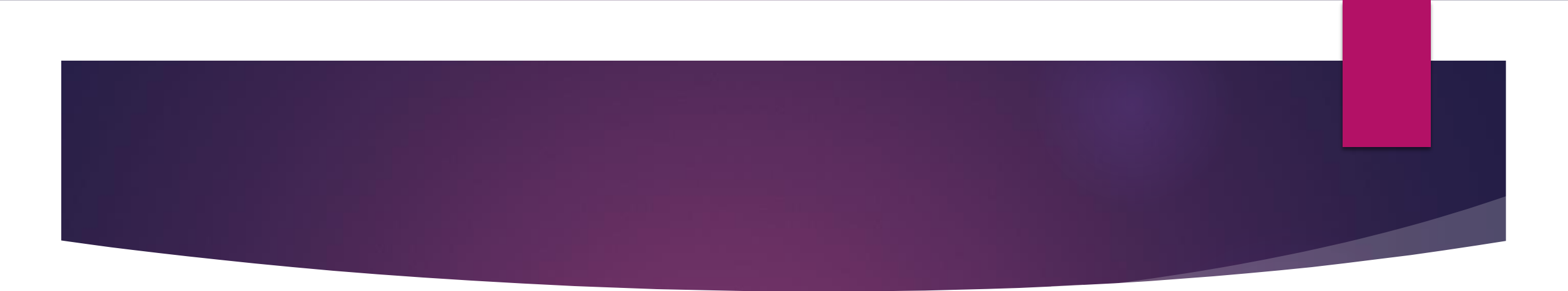
- Centrally **ApoE4** (to exacerbate microglia mediated neuroinflammation and subsequent neurodegeneration)
- Peripherally, **ApoE4** : increase macrophage production of cytokine (eg, IL 6, TNF) in response to proinflammatory stimuli.
- As cytokine storm is thought to account for COVID-19 disease manifestations, ApoE4 genotype may augment disease severity by impacting host immune response.

Hospital Settings

- Physicians or emergency room doctors should have high index of suspicion of COVID-19 for older people presenting with non-specific symptoms.

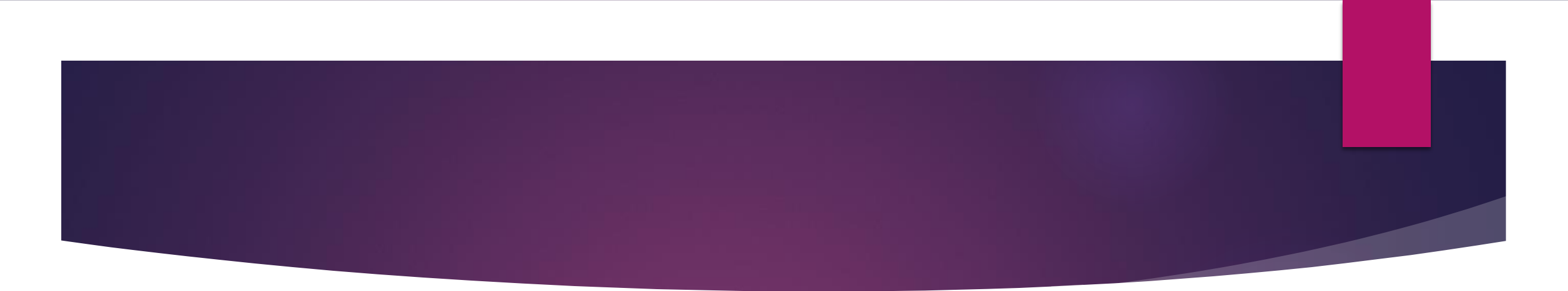
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- Lack of support from relatives
 - Unfamiliar environment

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- Agitation and wandering make compliance with infection control procedures extremely difficult:
 1. Remove masks
 2. Enter the bed spaces of other patients
 3. Come in contact with high-touch surfaces or equipment, or reach out and touch clinical staff
 4. Nasopharyngeal swabbing or blood sampling may not be possible

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- Common reversible factors for delirium:
 - Hypoxia, electrolyte disturbance, anemia, dehydration, pain, constipation, malnourishment, poor hygiene, **polypharmacy**, visual or hearing problems, immobilizations, sleep disturbance
 - Should be monitored closely and corrected when possible.

Drugs

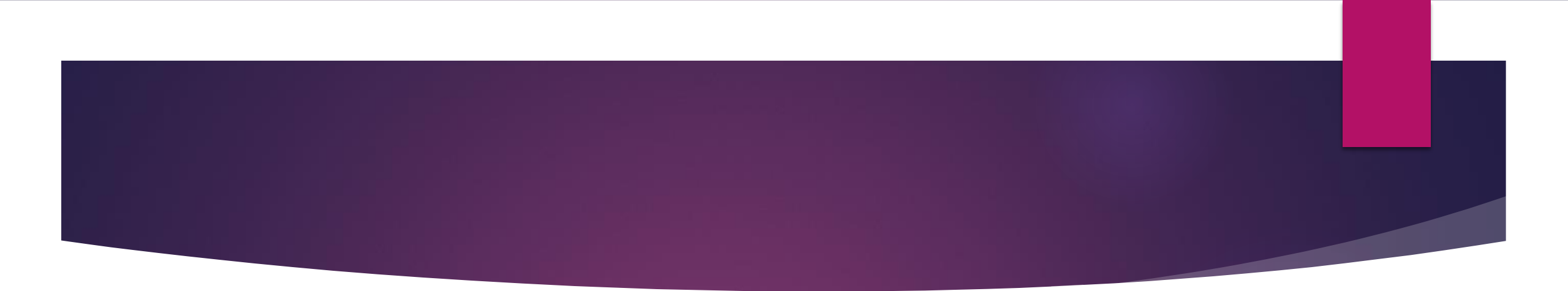
- Diphenhydramine
- Chlordiazepoxid
- Azithromycin
- Remdesivir
- Tocilizimab

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- Benzodiazepines
 - Physical restraints
should be avoided if possible

- **Corticosteroids:**

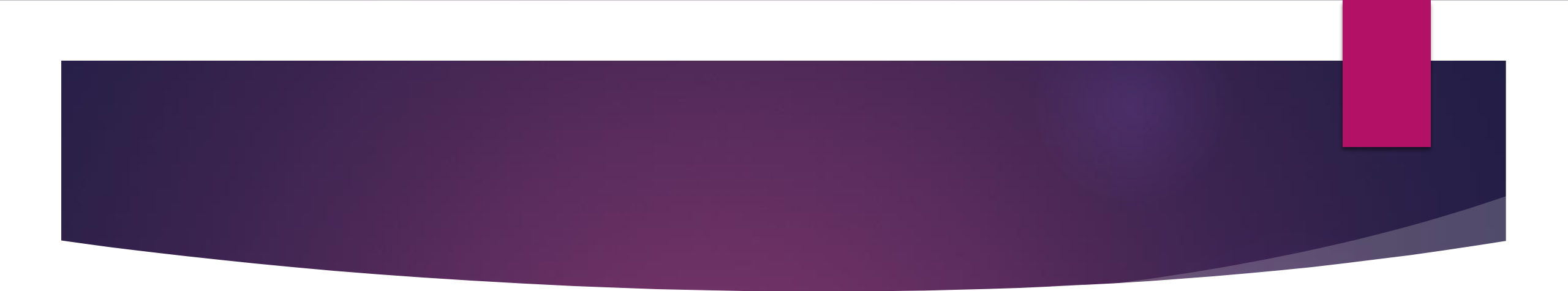
Given Empirically to hospitalized patients with severe COVID-19 experiencing cytokine storm frequently worsen delirium and should be used with caution in dementia patients.(in Iran?!)

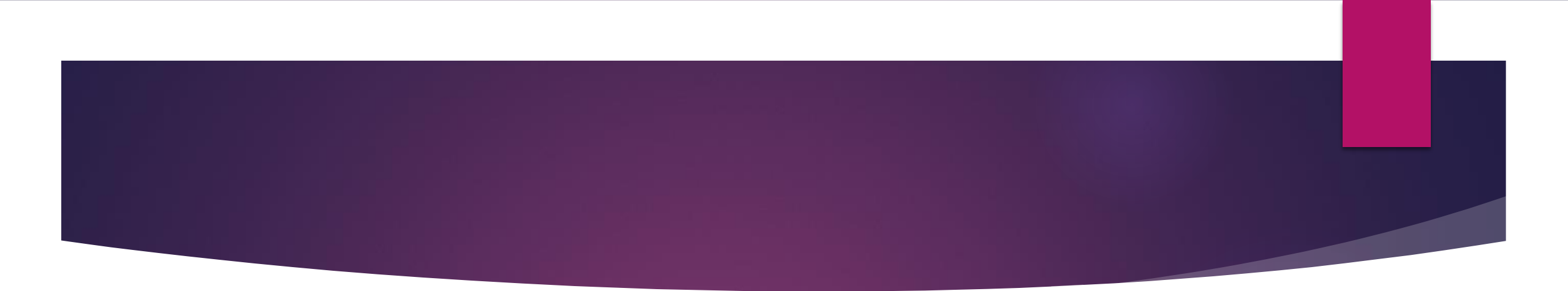
- Note however that in those with probable immune-mediated severe encephalopathy associated with COVID-19, corticosteroids may be helpful.

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- Because the term dementia encompasses a wide range of severities, with many patients living in the community with a good quality of life, a dementia diagnosis should not be used as a blanket exclusion from critical care

Occult infection:

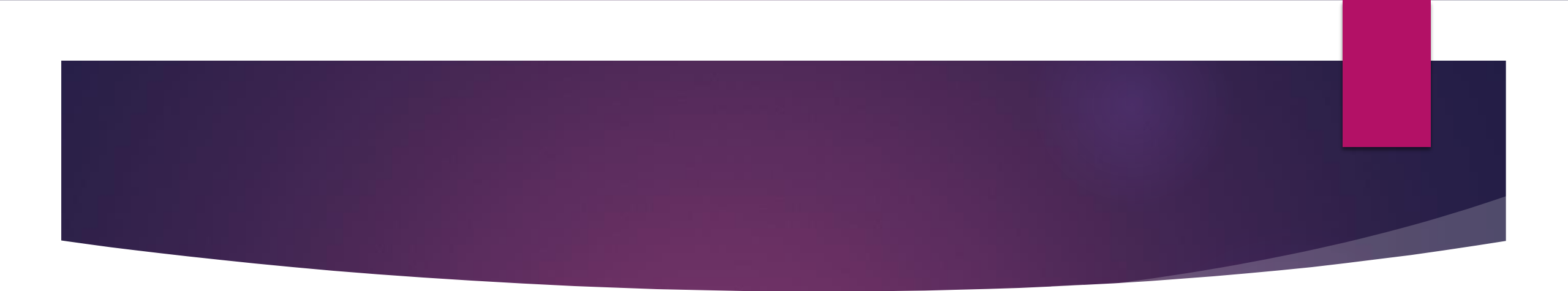
- These patients are admitted initially to COVID-19 “negative”.
- Movement from “negative” to “positive” areas further increases likelihood of delirium and loss of continuity of care.
- The risk of other preventable harms related to dementia , such as falling, inadequate nutrition, and pressure sores.

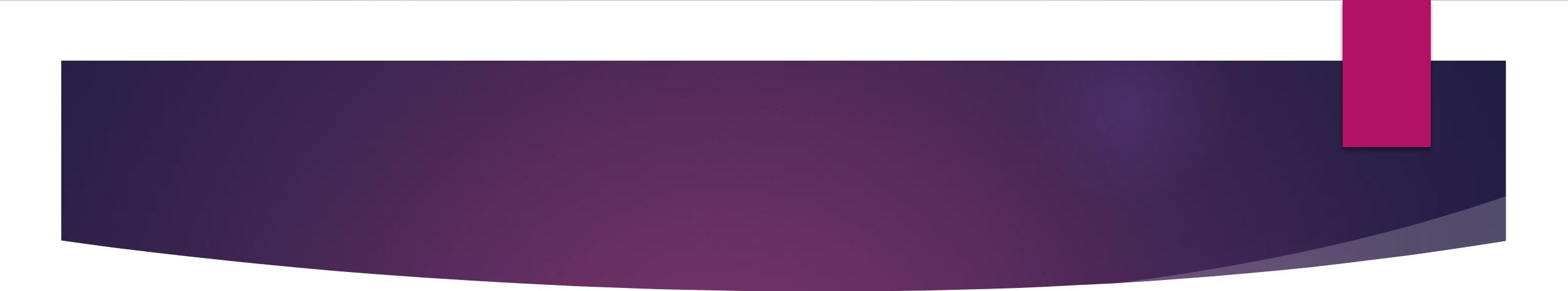
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- At the patient level, clinical management for older patients with dementia should be in line with the latest treatment guidelines for COVID-19

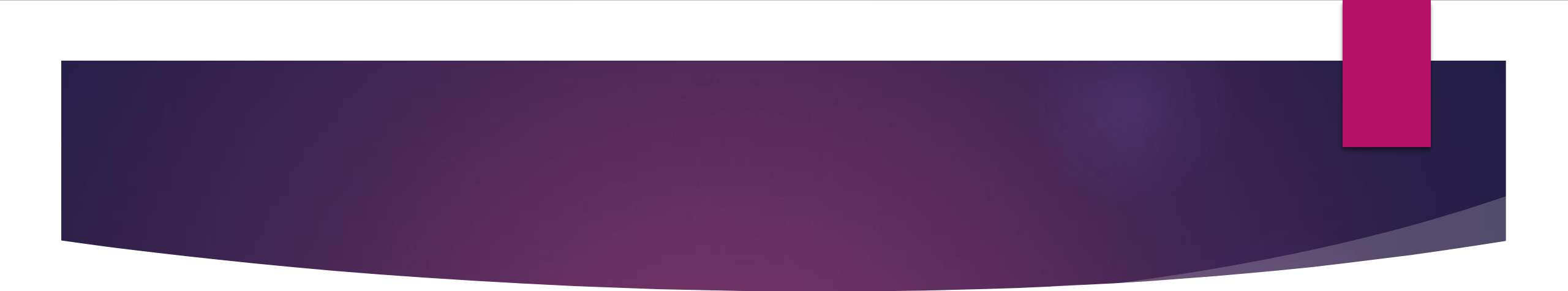
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- Triage of patients with dementia should be based on objective predictions of short-term mortality such as the Clinical Frailty Scale, rather than unsubstantiated suppositions about quality of life.

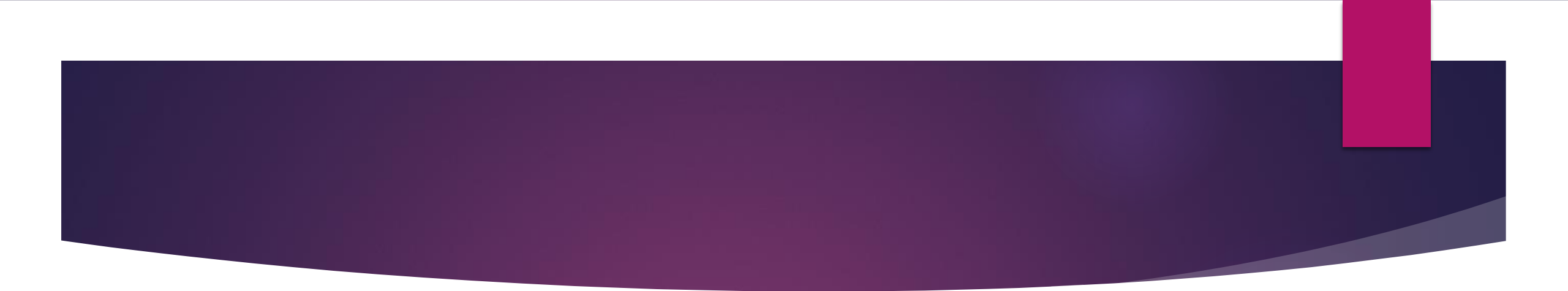
Vaccination

- Vaccination is therefore crucial for AD patients
- However, the safety and effectiveness of SARS-CoV-2 vaccines for AD patients is still unclear

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- Clinical studies have proved that elderly patients with neurodegenerative diseases can elicit an immune response similar to that of normal elderly people after influenza vaccination.
 - Specifically, the effectiveness of the vaccine was not significantly different between the two groups

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- The protective effect of live attenuated herpes zoster vaccine for people ≥ 70 years is significantly lower than that for people 60–69 years

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- These data indicate that AD patients can preserve their immune response to the vaccines, but the effectiveness of the vaccines may gradually decrease with age

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- Therefore, we speculate that the inactivated vaccines against SARS-CoV-2 are relatively safe for AD patients.

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Thanks for Attention

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