



Paris Seminar for Patients & Caregivers

What Causes Myeloma: Current Understanding



International Myeloma Foundation

Brian GM Durie

Saturday June 10, 2017



Association Française des Malades du Myélome Multiple



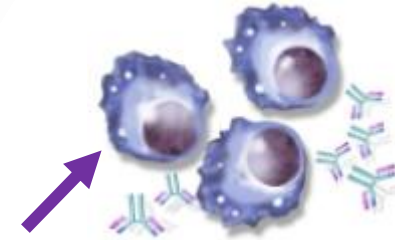
Causes of Myeloma

- **Underlying tendency**

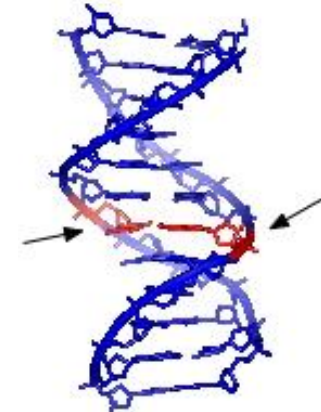
- Can be in families (5 – 7%)



- **Multiple possible trigger factors**



- **DNA damage from toxic exposures**





Underlying Tendencies

➤ Immune defect

- Abnormal immune response
- Overreaction of immune system

➤ Unable to break down toxic chemicals

➤ Unable to repair DNA damage

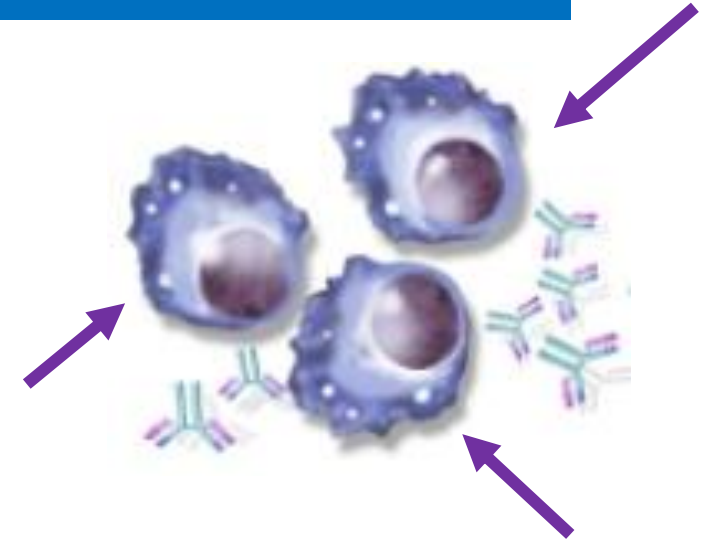




Trigger Factors

Increase number and growth of plasma cells which could be or become damaged

- Inflammation
- Infection
- Obesity
- Implant surgery
 - Metal pins/hip/knee
 - Breast silicone
 - Dental
- Trauma: accidents/tissue injury

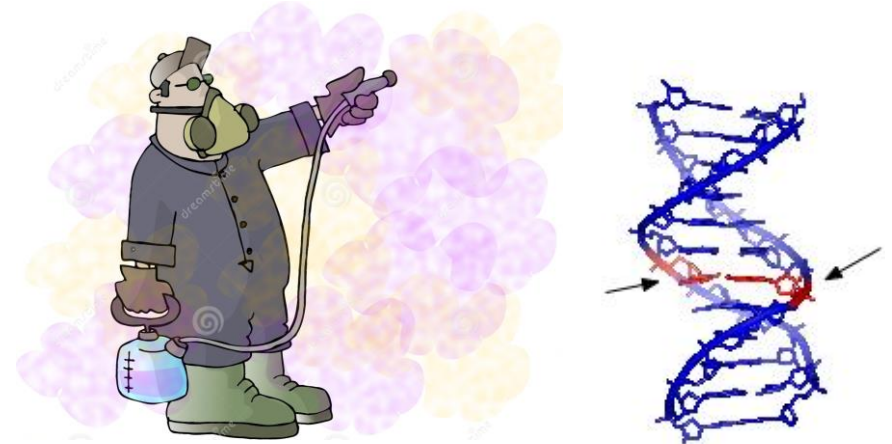




Causes of DNA Damage

Toxic chemicals

- Benzene; solvents
- Farm chemicals
- Fire retardants
- Agent Orange/Vietnam
- Processed food/drink chemicals



Radiation

- Atomic
- Diagnostic/therapy

Other

- Severe tissue damage: lightning strike





Exposure Situations

Jobs

- Industry: benzene/solvents/etc
- Farming: spray chemicals
- Fireman: fire retardants/flammable chemicals
- Military operations



Social Activities

- Schools: weed/building sprays
- Parks/golf courses



Home

- Pest spraying
- Personal use chemicals
- Electronics

Food

- GMO products
- Processed foods/drinks





Prevention Strategies

- Screening for MGUS
- Lifestyle changes
- Healthy diet
- Exposure precautions/treatment





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