Drugs used in vasculitis

5th October 2019

Dawn Davin

Renal Clinical Pharmacist

Dawn.davin@tuh.ie

Tallaght University Hospital | Ospidéal Ollscoile Thamhlachta

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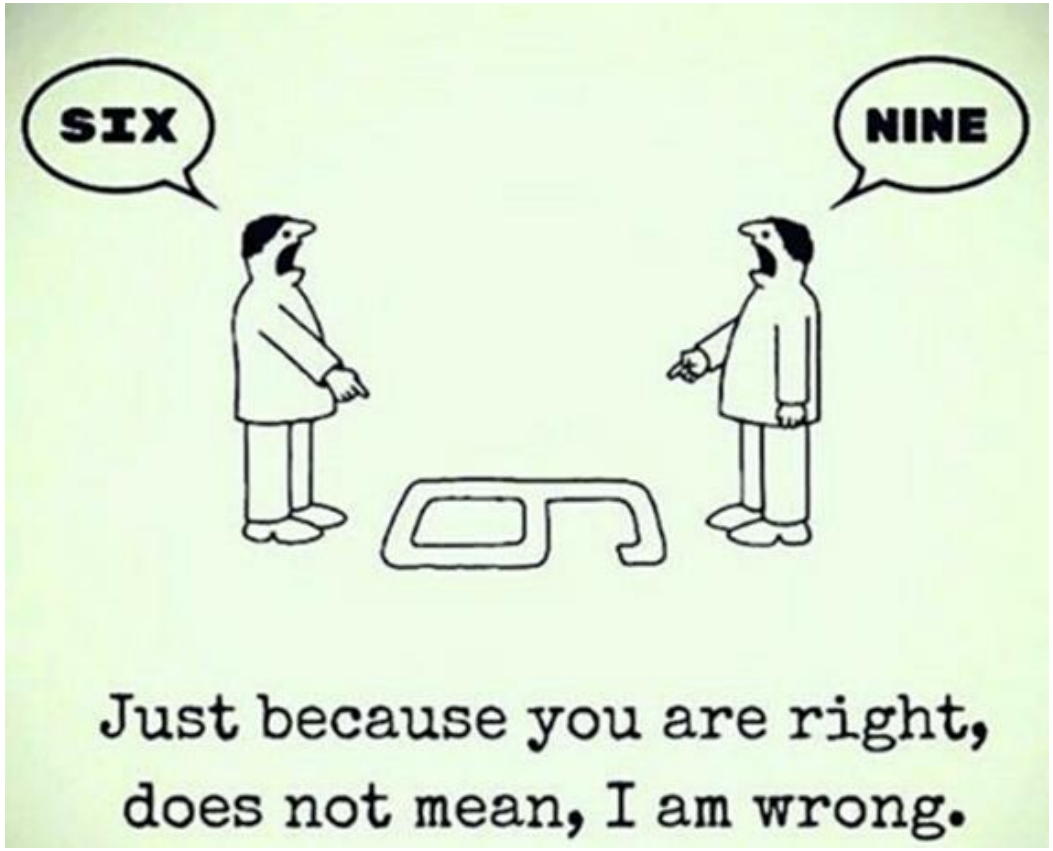
TRINITY HEALTH KIDNEY CENTRE

What does it feel like to be a patient?

Remember:
You add value & insight to healthcare & how it is provided
PAMs
PREMs
PROMs

Concept of Perspective



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Cyclophosphamide
Patient Information Sheet

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PATIENT INFORMATION BOOKLET

Rituximab

Information about your medicine

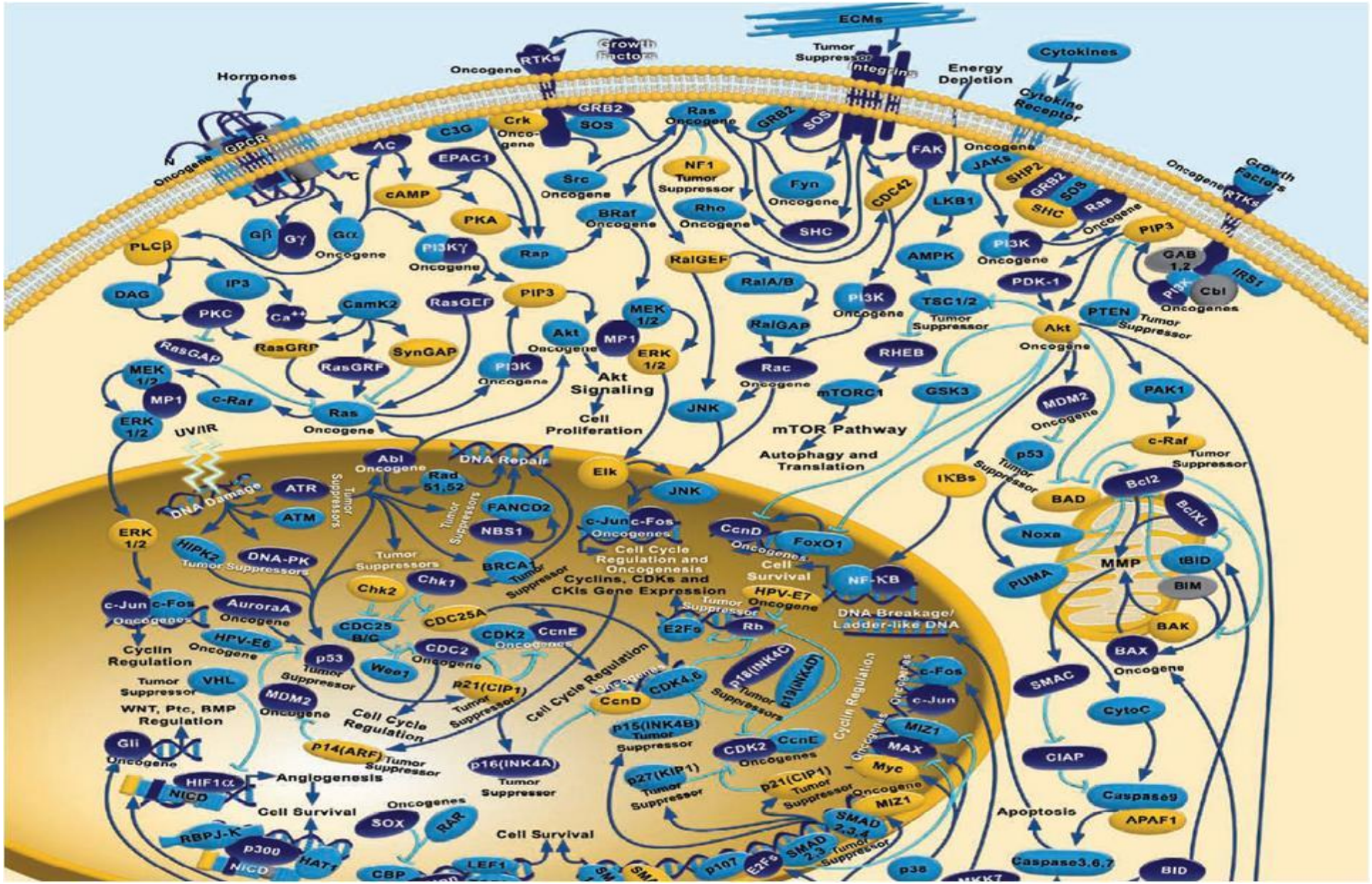
Medicines used to treat Vasculitis

Immune system modifying drugs		
Rituximab		
Cyclophosphamide		
Azathioprine	Imuran®	
Methotrexate		
Mycophenolate	Cellcept®	
Immunoglobulin		
Steroids – Prednisolone	Deltacortril®	

Supportive Medicines		
Bone Protection **Calcium & Vitamin D**	Kalcipos® Calcichew® Ad-cal® Desunin®	Alendronate, Alendronic Acid Fosamax®, Fosavance®
Stomach Protection (PPIs)	Esomeprazole, Omeprazole, Lansoprazole	
Blood Pressure Control	Bisoprolol, Amlodipine, Irbesartan	
Infection prevention	Septrin (Co-trimoxazole), Nystatin	
Other Medicines	Apixaban, Paracetamol, Serc, Simvastatin, Dymista, Duloxetine	

How do the medicines work?

Complex!



Immunosuppression – what do you need to think of?

Side-effects of individual medicines

Managing side-effects of medicines, e.g. bone protection if taking steroids

Infection risk & exposure to people with infections

Skin protection

Wound healing

Sick day rules for some drugs, e.g. steroids

Vaccines

Effects on fertility/pregnancy & breast-feeding issues

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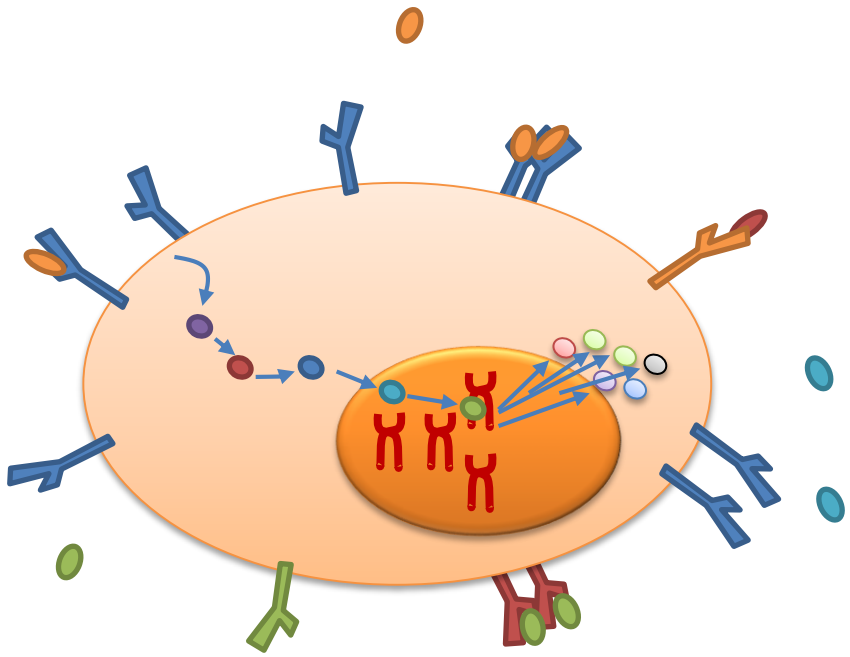
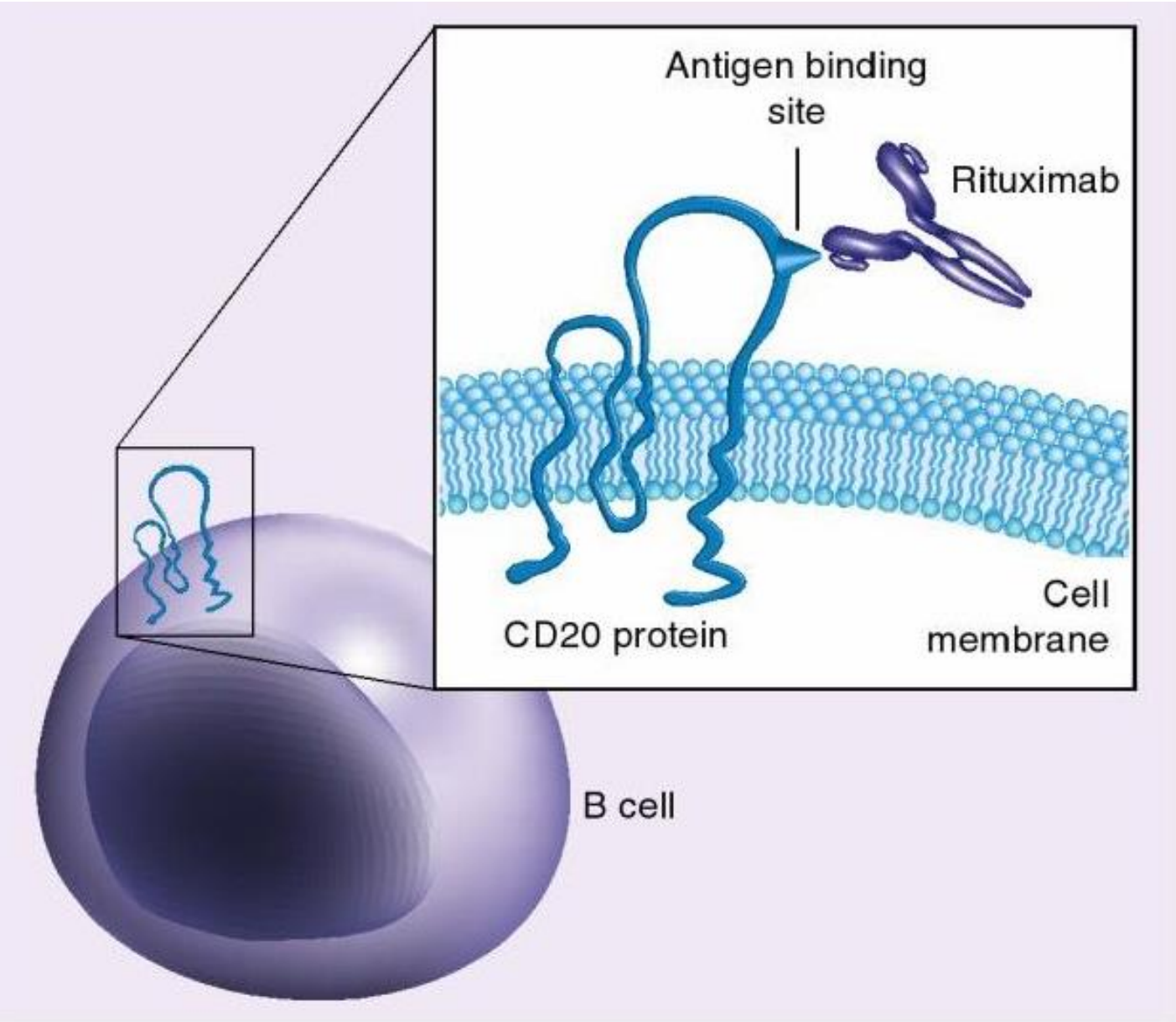
They do what?

Drug	How does it work?
Cyclophosphamide	DNA of immune cells is affected (alkylating agent)
Rituximab	Monoclonal antibody – CD20 protein (“antigen”) on surface of B cells
Glucocorticoids	Effects T-cells and cell messenger systems
Tacrolimus	Calcineurin Inhibitor (T-cells)
Mycophenolate	IMPDH (enzyme) Inhibitor (T-cells & B-cells)
Sirolimus	mTOR inhibitor (T-cells)
Methotrexate	Antimetabolite immunosuppressant – effects an enzyme at cell level
Azathioprine	Antimetabolite immunosuppressant – effects an enzyme at cell level
Avacopan	Blocks complement (Ca5) receptor

Antigens, Antibodies & B-cells…….

- Antibodies are part of our immune system, our body uses them to kill infecting organisms like bacteria and viruses
- Antibodies are made by special B-lymphocytes (B-cells)
- We are born with millions of B-cells, each of which recognises a different antigen through its B-cell receptor
- An antigen could be a protein on a bacteria or virus
- When the B-cell recognises an antigen, it releases its B-cell receptor into the bloodstream, which is now called an antibody
- The antibody triggers an immune response against the antigen




Antigen binding
site
Rituximab
CD20 protein
Cell
membrane
B cell

Cyclophosphamide

- Infection risk
- Effect on bladder and urinary tract – fluid intake
- Blood in the urine
- Nausea & vomiting
- Monitor blood count, kidneys, liver
- Monitor lungs and heart
- Contraception & fertility issues
- Hair loss (Alopecia)
- Effect on blood sugars
- Stomach upset

Rituximab

- Drug Reactions
- Effects on the heart
- Infection Risk
- PML
- Hepatitis B Infection screen
- Tuberculosis (TB) infection screen
- Monitor blood count
- Avoid in pregnancy & breast-feeding
- Stomach upset
- Rash

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Mycophenolate

Monitor kidneys & liver	Effect mood & sleep
Infection	Headaches, dizziness
Stomach upset – nausea, diarrhoea, ulcers	Gout
Drug Interactions	Joint/muscle pain
Contraception – avoid in pregnancy	
Monitor electrolytes	
Monitor blood sugars	
Monitor cholesterol/lipids	
Monitor blood pressure	

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Methotrexate	Azathioprine
Monitor kidneys/liver/lungs	Interaction with medication used to treat Gout (Allopurinol & Febuxostat)
Drug interactions	
Monitor full blood count	Monitor full blood count – TPMT enzyme check
Infection risk	Infection risk
Monitor closely if retaining fluid	Monitor kidneys, lungs, & liver
Mouth/stomach ulcers & upset	Take one hour before or 2 hours after milk or dairy
Vaccines	Drug Interactions
Contraception/Pregnancy	Protect skin
Vitamin B12 & folic acid	
Protect from sunlight	

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Steroids

Increased appetite, leading to weight gain

Mood changes – irritable/anxious

Difficulty sleeping – “alerting”

Indigestion/heartburn

Increased risk of infections – chickenpox, shingles

High blood sugars or diabetes

Weakening of the bones

Skin thinning

Cataracts/Glaucoma

High blood pressure

Affect wound healing

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Avacopan

Avacopan interferes with the inflammatory response by blocking the protein C5a.

C5a is a member of the complement system, a family of proteins that plays an important role in immune response.

Complement proteins help recruit white blood cells to areas of infection or injury, to defend the body and promote healing. But in autoimmune diseases, white blood cells are recruited to healthy tissue, where they build up and cause damage.

It blocks the effects of C5a by targeting its receptor, C5aR. Blocking C5aR interferes with messages to white blood cells, so fewer are attracted to inflammation sites.

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Biosimilar Agents…what's "similar" about them

Biological medicine – medicine derived from living cells or organisms, consisting of large highly complex molecular entities which may be difficult to characterise.

A **biosimilar medicine (or 'biosimilar')** is a biological medicine that is developed to be highly similar, but not identical, to the licensed originator biological medicine and shows no clinically meaningful difference in terms of quality, safety, & efficacy.

Biosimilars must demonstrate that there are **no clinically meaningful differences** compared to the originator biological medicine in order to be approved by the European Medicines Agency (EMA).

The evidence acquired over ten years of clinical experience with biosimilars demonstrates that they can be used as safely and effectively in all their approved therapeutic indications as their originator biological medicines (1st biosimilar 2006)

Regulatory bodies, including the EMA and the Health Products Regulatory Authority (HPRA), have published guidance and information for healthcare professionals and patients in relation to biosimilars.

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Where can I look form more information?

www.hpra.ie

HPRA
An tÚdarás Rialála Táirgí Sláinte
Health Products Regulatory Authority

Biological and biosimilar medicines: What patients should know

The questions and answers in this document have been edited and approved for NALA's Plain English Mark.

Plain English
Approved by NALA

WHAT IS A BIOLOGICAL MEDICINE?

A **biological medicine** contains an active substance that is produced from a biological source such as living cells. The active substance in a biological medicine is what makes the medicine work. Biological medicines are also called **biologics**.

Here are some biological medicines that you may have heard of:

- The hormone insulin, which is used to treat diabetes;
- Vaccines;
- Monoclonal antibodies, which are a type of protein that can bind to substances in the body. They are used to treat a wide variety of conditions such as cancer or arthritis.

Biological medicines are different to chemical medicines such as paracetamol or aspirin.

Chemical medicines are smaller and less complex than biological medicines. When chemical medicines are made, the active substance is identical in every batch and every brand.

www.ema.europa.eu

European Commission

What I need to know about

Biosimilar Medicines

Information for patients

Informing Patients

Focus groups prior to adoption

One to one patient consultation by trained clinician, nurse or pharmacist in lead up to the adoption

The utilisation of a patient information leaflet with Q&A section and contact details of relevant HCP if patients wish to discuss further

Patient letter to be sent out to patients explaining:

1. The planned change
2. How the decision has been undertaken
3. That clinical efficacy and safety have not been affected
4. That significant financial benefits will be achieved for the NHS and/or the trust

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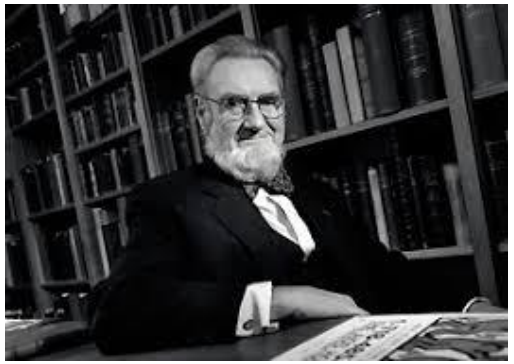
Video: EMEA Biosimilar Medicines

https://www.youtube.com/watch?v=YPIvVl4xwFg&list=PL7K5dNgKnawb3IQri7lIr5wbaWxP71jQJ&index=1

“Drugs don’t work in patients who don’t take them”

C. Everett Koop, US Surgeon General



Could we all just go for coffee now,
or, is there anything else to consider?

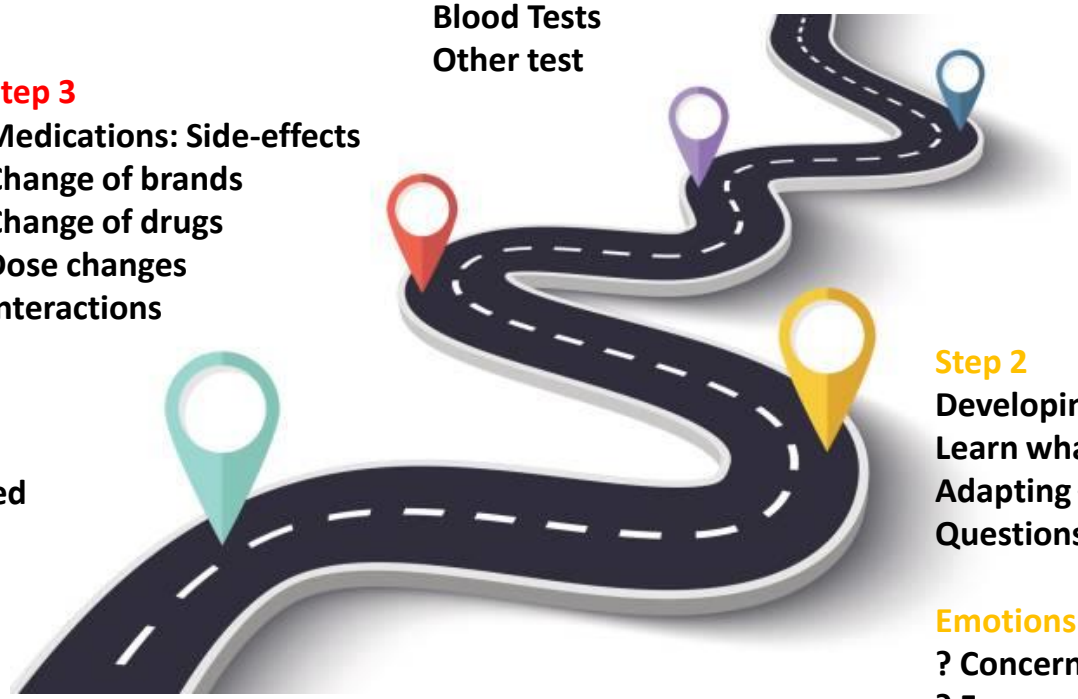
European Journal of Heart Failure 2017;19:1412–1413

The Medication Journey

Step 5
The journey and commitment to your medication and managing your condition is ongoing…..
"The road is long"

Step 4
Follow up appointments
Blood Tests
Other test

Step 3
Medications: Side-effects
Change of brands
Change of drugs
Dose changes
Interactions



We understand

Step 1
Diagnosis
Medicines prescribed
Time of change

Step 2
Developing understanding of your condition
Learn what your medicines are for
Adapting – time of change
Questions

Emotions
? Concern ? Confusion
? Fear ? Uncertainty
? Anxiety

If it’s a journey……

Don’t be a passenger

Be the driver

My Medicines is a list of all of the medicines and supplements you take and some of their details.

Please fill in the My Medicines information inside this leaflet.

This is your record of your medicines. Please keep this document safe and bring it with you when coming to Tallaght Hospital or attending any healthcare appointment. If you become ill, you or a family member can bring this record to hospital.

We also ask that you bring all of your medicines, in their original boxes and containers if you have them, with you when coming to the hospital.

Your medicines list will help hospital staff treat you safely.

KNOW YOUR MEDICINES
ZERO HARM

IMPORTANT

To fill out My Medicines you need **all your medicines in front of you** including prescribed, non-prescribed and over the counter medicines.
If you don't know what medicines you take or you need help filing out My Medicines ask your pharmacist, doctor, friend or relative to help you.

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www.tallaghthospital.ie

Leaflet Prepared: 24/2/15

working together to improve safety

Information for patients and families

My Medicines

KNOW YOUR MEDICINES
ZERO HARM

TALLAGHT HOSPITAL

working together to improve safety

Name:		My Family Doctor:		My Pharmacy is:	
Date of Birth:		My Family Doctor Phone No.:		My Pharmacy's Phone No.:	

The medicine I am allergic to:	Other Allergies:	Date I filled out this form:

Name of Medicine	The strength	How much medicine I take each time	I take it	I take it every day (Yes / No)	Why I take it?
ABC Tablets	25mg	2 tablets	Twice a day every morning & evening	Yes	For my heart

Helps you to keep track of your medicines

More informed

Allows you to have more time with your consultant/doctor/nurse/ pharmacist/dietician and focus on you

Original containers

Blister pack

Dosette Box

Look	Medication	Dose	Amount	Frequency	Started
	Atenolol	50 mg	½ Tablets	in the morning	02/27/13
	Carvedilol Coreg	25 mg	1 Tablets 1 ½ Tablets	Wake Night	02/27/13
	Hydralazine Apresoline	25 mg	¼ Tablets 1 ½ Tablets 1 Tablets	Breakfast Dinner Night	02/15/13
	Insulin Exubera	100 units/mL	**on sli...** Injection 15 Injection 20 Injection 20 Injection	Wake Lunch Dinner Night	02/09/13
	Lisinopril	10mg	¾ Tablets	2x/day	02/10/13
	Morphine		½ Tablets 2 ½ Tablets	Wake Lunch	

What do you medicines look like?


Calendar
Sun Mon Tue Wed Thu Fri Sat


Thank
you