

AGELESS BEAUTY

Embrace the Power of Holistic Health for Youthful Skin and Beyond

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Chronologic Aging

The process of becoming older, a process that is genetically determined and environmentally modulated.



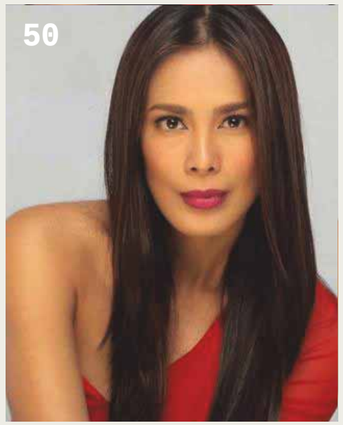
Biological Aging

The age we appear to have, the LOOK!











Aging is an inevitable fact of life and many people are terrified with aging. Like fine wine, with the passage of time, things can only be better.



SKIN AGING EXPOSOME

- Term coined by Christopher Wild in 2005
- Total exposures, both external and internal factors, and the response of the human body to these factors, leading to biological and clinical signs of skin aging
- Trigger molecular processes that damage the skin structure, leading to the aged skin appearance.





“Photoaging causes 90% of skin aging”

Photoaging

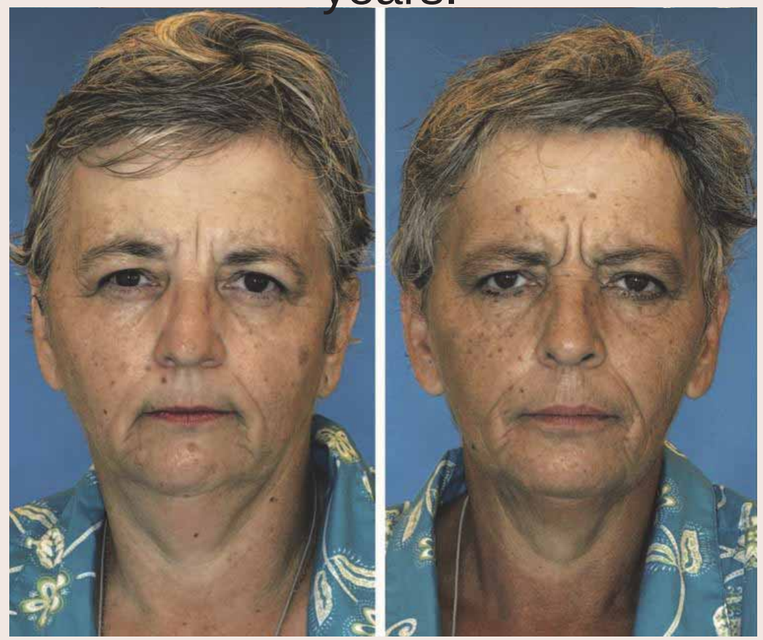
61- year old twins ; Twin B had approximately 10 hours per week greater sun exposure than twin A and the perceived age difference was 11.25 years



Twin A **Twin B**

Smoking

Twin B had a 40-year greater smoking history than twin A.
Twin A had 2 years of hormone replacement therapy.
The perceived age difference was 8.25 years.



Twin A **Twin B**



SUN SAFETY TIPS

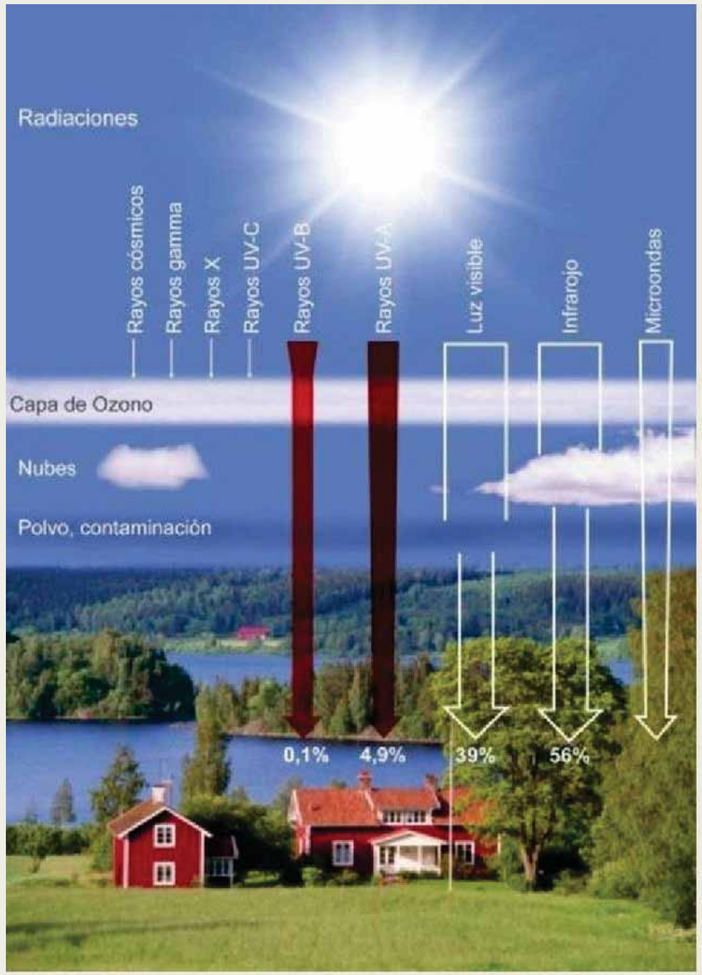
- Limit sun exposure during the hours when the sun's rays are the strongest, 10 am to 4 pm.
- Your shadow is an indicator of the sun’s intensity. If your shadow is shorter than you are, the sun is at its highest intensity.
- UV increases per 300 meter increase in altitude. Over 90% of UV can penetrate the cloud.

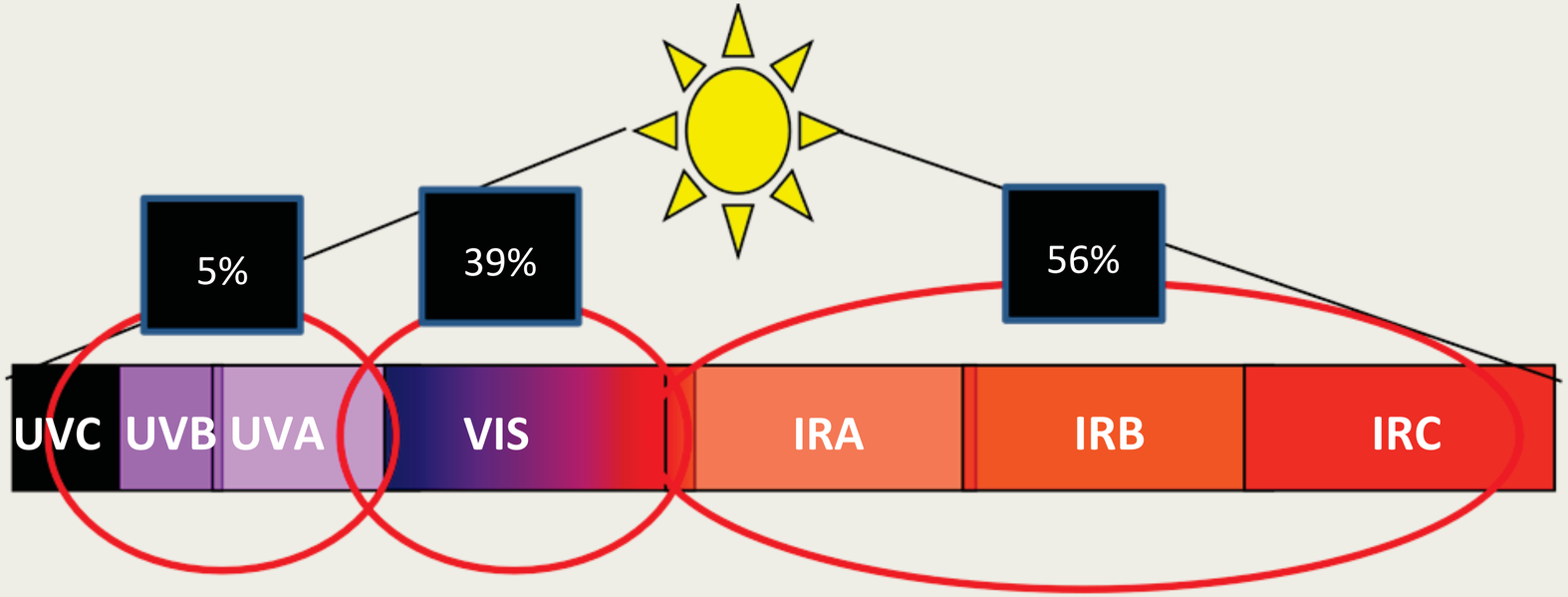


SUN SAFETY TIPS

- Wear a wide-brimmed hat, sunglasses, and dark-colored, tightly woven clothing.
- Hydration increases UV transmission
- Avoid exposure to reflective surfaces like snow and water.
- UV rays can be reflected off of sand, tile, water, snow, and buildings.

SUN RADIATION EFFECT ON SKIN







New kids on the Block: Sunscreen

FULL SPECTRUM PROTECTION WITH SPF 50:
UVA-UVB-HEVIS-IRA

FERNBLOCK TECHNOLOGY
ANTI-OXIDANT AND PROTECTION INCRESASED 4X

ROXISOMES
REPAIR DNA DAMAGE BY OXIDATIVE STRESS

WATER-RESISTANT

CHOICE AND PROPER USE OF SUNSCREEN

- Use Broad Spectrum Sunscreen whose active ingredients block UVA, UVB, HEVis and IR
- Apply liberally and evenly 20 minutes before you go outdoors.\
- Cover all exposed áreas. Pay special attention to the face, ears, nose, arms, and legs.
- Reapply every 2 hours or after swimming or heavy sweating
- Sunscreens should be used every day, including cloudy days.



DNA Repair in Pharmaceuticals







L-ergothioneine: antioxidant

KEY DNA REPAIR ENZYMES

PHOTOLASE

Repairs DNA Damage

ENDONUCLEASE

Enhances DNA Repair

GLYCOSYLASE

Repairs free Radicals



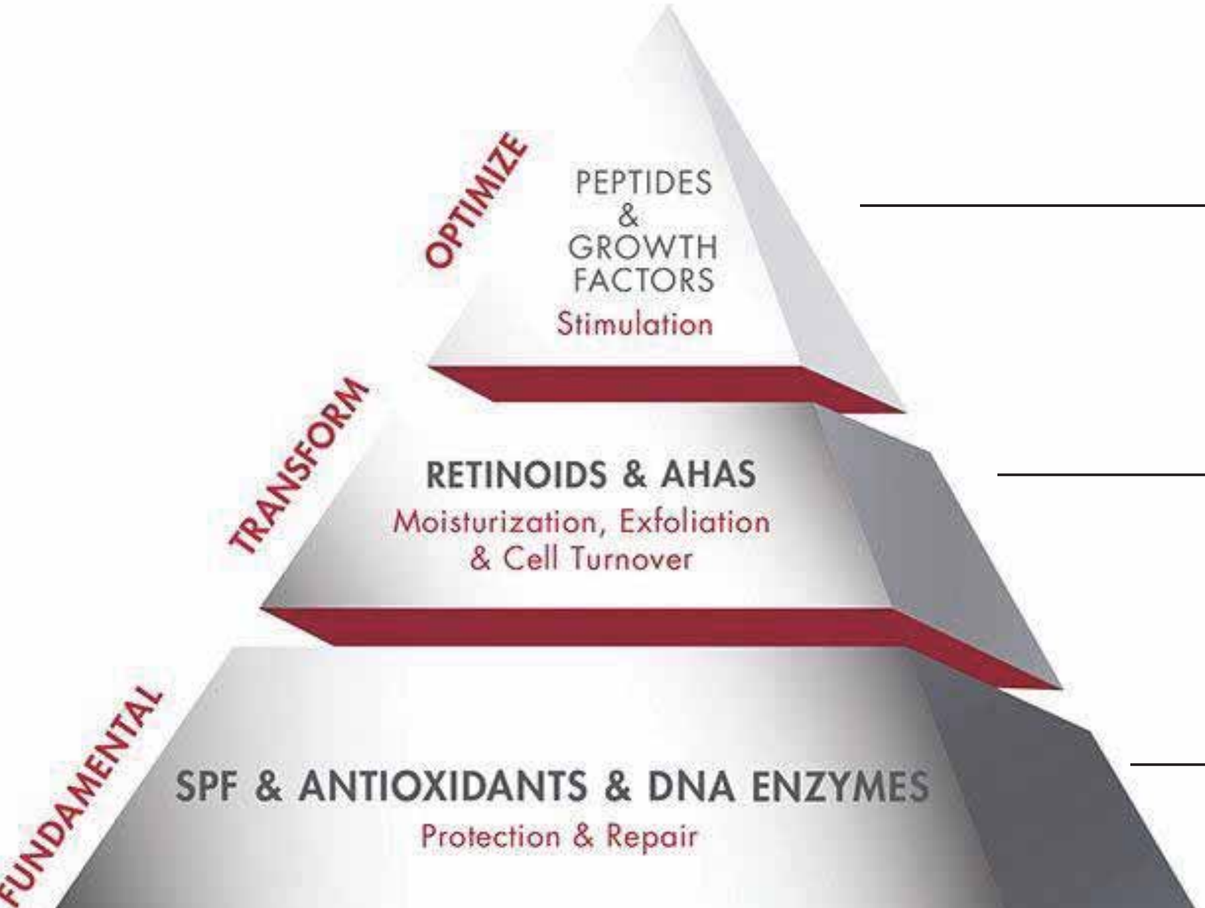


* Photozyme R

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The Skin Health and Beauty Pyramid: A Clinically Based Guide to Selecting Topical Skincare Products

Flor A. Mayoral MD,[a] Julie R. Kenner MD PhD,[b] and Zoe Diana Draelos MD[c]
[a]Mayoral Dermatology, Coral Gables, FL
[b]Kailua, HI



- A roadmap in achieving healthy skin.
- Simplify product selection.
- Improve clinical outcome.

NICE TO HAVE

Provides stell stimulation

NEED TO HAVE

To transform , normalize and rejuvenate the skin.

MUST HAVE

Daily fundamental skin protection and repair ingredients.

Journal of Drugs in Dermatology Vol 13, Issue 4 April 2014

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NICE TO HAVE

Provides cell stimulation



Most Common Complaints (Symptoms) in Aging Patients (>50 yrs old)

- Pain: Muscle aches, Back pain, Joint pain, Headache
- GI Problems: Constipation, Bloating, Indigestion
- Respiratory Problems: Chest pain, Bronchospasm, Cough, URI
- Itching: Skin rash, Skin Dryness
- Sleep problems: Less sleep, Difficult to fall asleep, Wake up too early, Wake up during the night, Restless sleep, Insomnia
- Weakness: Mobility, Loss of muscle strength, Tremor ⟶ Injurious fall ⟶ Fracture ⟶ Disable
- Urinary Track Problems: Urinary Incontinence, Overactive Bladder, Nocturia (usually untold)
- Mental Health: Depression, Suicidal thoughts, Mood swing
- Memory issue: Forgetfulness

Vitamin D Supplementation reduced the risk of cancer death by 16%

- Randomized controlled trials comparing vitamin D supplementation with a placebo or no treatment for mortality were included.
- 52 trials with a total of 75, 454 participants were identified.
- Vitamin D supplementation was not associated with all cause mortality (risk ratio 0.98, 95% confidence interval 0.95 to 1.02 I^2=0%), cardiovascular mortality (0.98, 0.88 to 1.08, 0%) or, non-cancer, non-cardiovascular mortality (1.05, 0.93 to 1.18, 0%). However, Vitamin D supplementation statistically significantly reduced the risk of cancer death (0.84, 0.74 to 0.95, 0%)
- In subgroup analyses, all cause mortality was significantly lower in trials with vitamin D_3 supplementation than in trials with vitamin D_2 supplementation (P for interaction = 0.04); neither vitamin D_3 nor vitamin D_2 was associated with a statistically significant reduction in all cause mortality

Simple healthy lifestyle advice is a must DO during medical visits

“Eat less, live longer“

“Sugar is toxin”

Grains over Rice

Vegetable and fruit in moderation

Avoid fried food, cut down animal fat including milk

Choose olive oil and rice bran oil

Drink more water, filtered not tap

Drink more mineral water, avoid reverse osmosis water

Exercise your muscle, back and leg exercises are best

Take supplements (vitamin D, probiotics)

Try to be positive

We need functional food to prevent disease.

Sometimes, functional food can be Supplements

- Functional food are foods that have a potentially positive effect on health beyond basic nutrition because they can promote optimal health and help reduce the risk of disease.
- Some of these nutrients are not regularly found in our everyday diet, and needed to be taken as supplements
- However, many nutrionists have been taught to hate supplements and believe that functional food and micronutrients should come in the form of supplements (pills or capsules)
- With this bias, many nutritionist recommend fortified food such as milk that has been fortified with vitamin D or DHA but call Vitamin D and fish oil supplements useless and dangerous.

What went wrong when doctors try to provide proactive Health care

- If insurance won’t pay and the patients won’t get sick, how can doctors get paid
- Most doctors eat poorly, It is not a surprise that they give poor nutrition advice
- Most doctors receive no formal education in sport medicine, and don’t exercise, but they will tell their patients to get exercise without knowing how
- They believe that removing the gallbladder, uterus, ovaries, and appendix is the way to prevent disease
- They give you allopathic drugs to treat laboratory results without awareness of drug side-effects
- When drug side-effects occur, instead of stopping the medicine, they give you more drugs to correct the side-effects
- They believe that vaccines can prevent infection without taking vaccine side-effects into consideration

PROACTIVE MEDICAL CHECKUP

- Blood pressure measurement
- Creatinine
- HbA1c
- Uric Acid
- ESR, CEA, and inflammatory marker
- Calcium Score and Oxidized LDL
- Heavy metal testing
- AA/EPA Test
- Vitamin D testing
- Hormonal levels
- Lifestyle and Nutrition Advice

Want to prevent metabolic syndrome?
Know your HbA1c

Numerous studies have shown the positive correlation between uric acid levels and HbA1c.

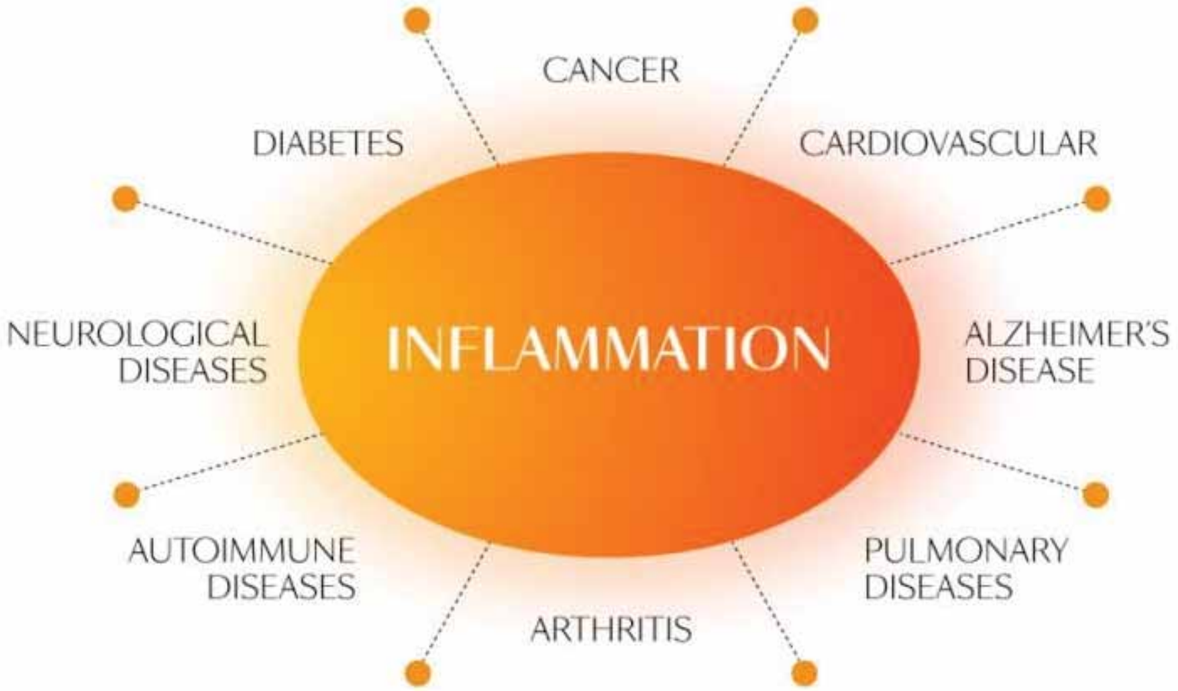
Doctors use HbA1c to monitor blood sugar control in diabetic patients, but some refuse to check for HbA1c in routine medical checkup.

- Diabetes is diagnosed when the HbA1c level is 6.5 or higher
- HbA1c higher than 6% indicate pre-diabetes
- Higher HbA1c indicate higher risk of cardiovascular diseases, Alzheimer’s, and cancer even in patients who do not have diabetes yet
- Early intervention by diet control and exercise is safe but not possible unless everyone should have their own HbA1c
- HbA1c increase can attribute to early death

Non-communicable Chronic Disease (NCDs)

The root cause of non-communicable chronic disease (NCD) is inflammation that can be fixed with lifestyle intervention, NOT allopathic drugs (that insurance allows).

Non- communicable Diseases (NCDs) including heart disease, stroke, cancer, diabetes, and chronic lung disease, are collectively responsible for almost 70% of all deaths worldwide.



Inflammatory Disease Lab test

Many Anti-aging specialist advise inflammation test using hsCRP but there are more specific and practical tests that does not only tell that patient is having inflammation, but also tells Doctors what to do next

- High levels of tumor markers usually indicate inflammation and not necessarily cancer
- High levels of ESR and CEA suggest gut detoxification program and possible colonoscopy
- High PSA could indicate prostatitis and two weeks of doxycycline
- High SGPT could indicate fatty liver, intermittent fasting and low carb diet is recommended
- An SGOT/SGPT ratio greater than 2 is highly suggestive of alcohol hepatitis and cirrhosis
- Level of EPA could tell who needs fish oil supplement

Heavy metal toxins are real, why nobody cares to check

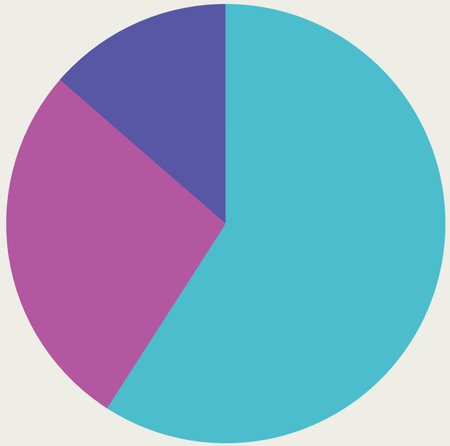
- PM 2.5 can harm our organ functions, especially lungs and kidney
- TACT trial has shown the improvement of cardiovascular endpoint after EDTA chelation, most doctors still deny that there is no such thing as heavy metal toxicity
- Doctors who say there is no such thing as heavy metal toxins never send blood tests for heavy metals

If we start by denying the importance of heavy metal toxins, there will be no proactive healthcare

The Root Cause of Chronic Diseases could be Micronutrient Deficiency

MACRONUTRIENTS

(Fat, Carbohydrates, Protein)



Carbohydrates: 55-65%

Fat: 25-30%

Protein: 10-15%

MACRONUTRIENT BREAKDOWN

MICRONUTRIENTS

(Vitamins and Minerals)



Facial Aging

- tissue displacement

- superficial fats increase or expand volume as we age

- loss muscle tone

- cutaneous aging (as asian we have high ceramide and thicker dermis) - but due to aging dermis collapses, sebum decline, reactive to irritation

- inflammaging - loss of elastin, flattening of basement membrane, less exchange of oxygen and nutrition.

- skin quality deterioration

Anchoring complex:

Retaining ligaments

Skin: laser, microneedling,

SubQ: HIFU, MFU

Muscles HIFES

Supraperiosteum:

biostimultor

Resources of SVF or Stem Cells

- Adipose tissue: most popular & a lot of numbers, & easy to harvest
- BM: Easy & fast access, a lot of experiences by BMT

  limited number of cells, sometimes hard to repeat frequently
- Blood: peripheral blood, small cell numbers → need to expansion (culture)
- Skin: Punch biopsy (fibroblast culture) & crush may leave skin defect
- Hair follicles: hair transplantation
- Gingiva or dental pulp
- Umbilical Cord blood: allogenic, expansion
- Cell products (culture): HearticellGram, Cartistem, Cupistem

Advantages of SVF over stem cells (ADSCs)

- The stromal vascular fraction (SVF) derived from adipose tissue contains heterogenous cell populations such as mesenchymal progenitor/stem cells, preadipocytes, endothelial cells, pericytes, T cells, and M2 macrophages.
- SVF-derived mesenchymal progenitor/stem cells can be easily expanded in vitro and have the potential to create diverse lineages of cells
- SVF cells demonstrate regenerative potential in damaged tissues or organs through paracrine and differentiation mechanisms
- SVF cells augment immunobiological tolerance by promoting inhibitory macrophages and T regulatory cells and by decreasing ongoing inflammation
- Numerous inflammations of freshly isolated, autologous adipose tissue-deprived SVF cells in cosmetic surgeries and in a wide variety of other specialties support the safety of SVF cells and have accelerated their clinical application

Classification of Stem Cells

- Autologous & Allogenic
- Harvesting & Cell expansion (=culture)
- Embryonic (or iPS) & Adult
- Mesenchymal stem cells vs Hematopoietic stem cells
- Umbilical cord
- Banking

Cosmetic Surgery/Medicine & SVF

- Fat graft
- Skin necrosis/Wound healing
- Skin rejuvenation with dermatological treatments
- Scalp/Hair growth
- Local Injection: ED, OA..
- Anti-aging: IV Injection

Considerations for IV Therapy

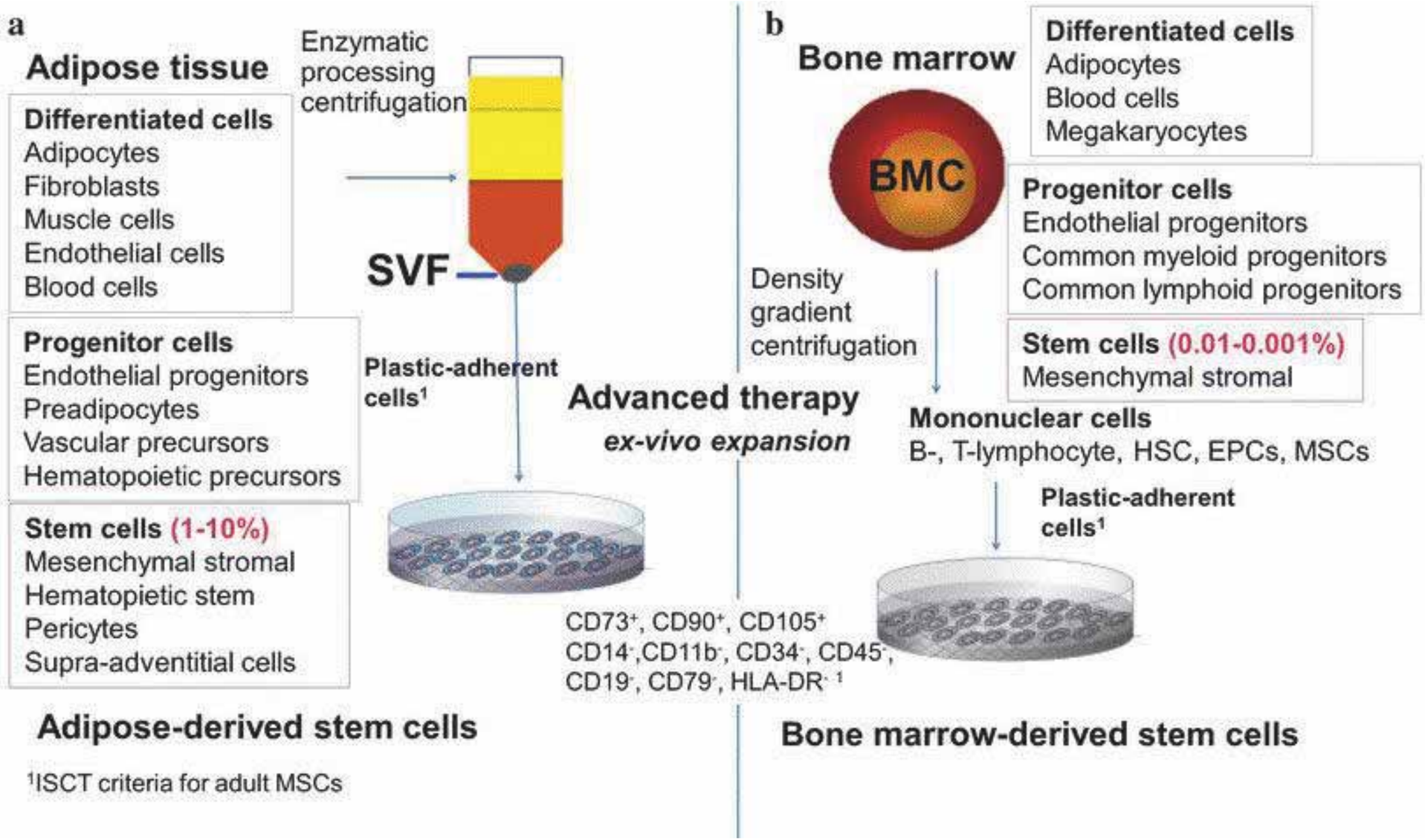
- Embolism by Cells aggregation: irregular surface of cell membranes & tendency to adhere to plastic surface

⟶ Filtering with 100 micrometer pore sieve before IV injection

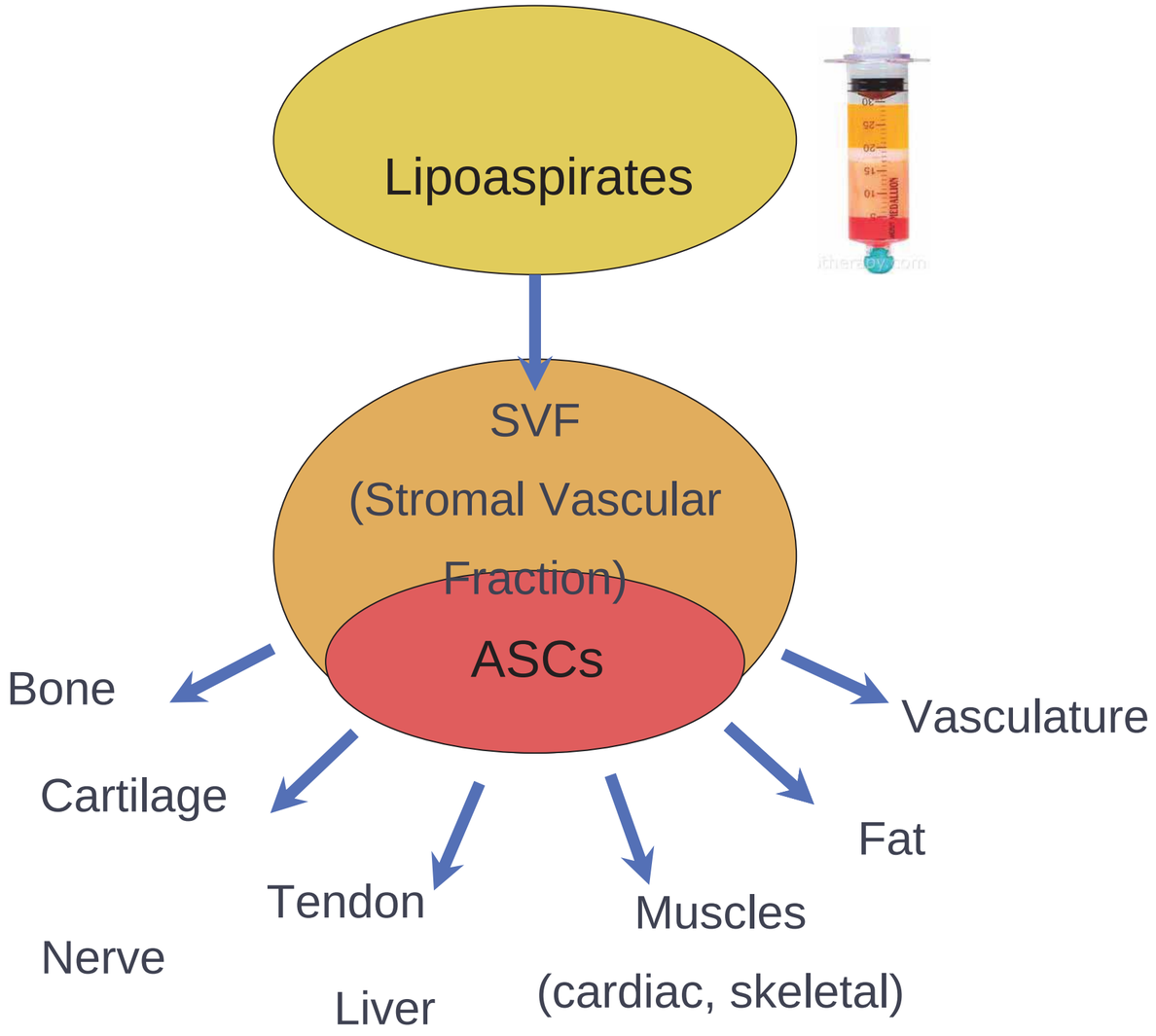
⟶ Classical injection style. Be careful to shake the IV plastic bag & long IV line when the flow is slow or stagnated

- After initial IV injection the cells flow into pulmonary circulation where a lot of cells will be trapped in the microcapillaries then move to general circulations. Some cases will be reported with slight increase of heart rate at the initial injection returning normal soon.
- Clean and sterile environment always
- Limited access to CNS ⟶ Lumbar puncture
- Lung, liver, spleen, BM..

Stromal Vascular Function



Stromal Vascular Function



The stromal vascular fraction (SVF) can be obtained from adipose and fluid portions of liposuction aspirates through collagenase digestion. SVF contains 10-35% ASCs, some of which are multipotent and have been shown to differentiate intp several lineages in vitro. SVF also contains blood-derived cells such as leukocytes

Thank you!