

Breeding around the mutant Fanconi gene....

it isn't really an art, and it isn't rocket science... it is simple GENETICS!!

Fanconi is a 'simple recessive' disease in which every single dog gets one gene from each parent.

The following "Punnett Squares" show the basic genetic make-up of what COULD be produced by each of the following possible breedings.

You can see information on the Fanconi Direct Test and FAQs on the BasenjiHealth.org site.

For all basic purposes, we will use the following notations:

N = Normal, or "unaffected" gene (mutant gene)

n = abnormal, or "affected" gene

The results of these crosses produced will ultimately result in the following:

NN = Normal, or Fanconi Clear

Nn = Carrier, or Fanconi Carrier

nn = Abnormal, or Fanconi Affected

IND status was a result from the Linkage Test:

**IND = Indeterminate, or Indeterminate between Probable Clear and Probable Carrier
(this dog will NOT become affected with Fanconi Syndrome)**

We have been instructed to ASSUME that all IND basenjis are Carriers for breeding purposes. They carry the mutant gene, and therefore CAN pass it on to their offspring.

The percentages seen below indicate the likelihood or chance that EACH puppy in that litter will have at being Clear, Carrier, or Affected with Fanconi Syndrome. Some folks will tell you that those percentages mean that is how many from each litter will be Clear, Carrier and Affected, THAT IS WRONG !!!

Genetics of a simple recessive is based on PROBABILITY, or chance.

THE FOLLOWING BREEDINGS ARE THE ONLY BREEDINGS THAT ARE RECOMMENDED BY THE BCOA HEALTH COMMITTEE,
if a breeder tells you differently, you need to go elsewhere.

There is absolutely NO breeding that gives even the smallest chance of producing Fanconi that is worth doing!

FANCONI CLEAR BRED TO A FANCONI CLEAR:

	N	N
N	NN	NN
N	NN	NN

EACH PUPPY has a 100% chance of being Normal, or Fanconi Clear (NN).
THIS IS AN ACCEPTABLE BREEDING.

FANCONI CLEAR BRED TO A FANCONI CARRIER:

	N	n
N	NN	Nn
N	NN	Nn

EACH PUPPY has a 50% chance of being Normal or Fanconi Clear (NN)
and a 50% chance of being Fanconi Carrier (Nn).
THIS IS AN ACCEPTABLE BREEDING.

FANCONI CLEAR BRED TO A FANCONI AFFECTED:

	n	n
N	Nn	Nn
N	Nn	Nn

EACH PUPPY has a 100% chance of being a Fanconi Carrier (Nn).
THIS IS AN ACCEPTABLE BREEDING.

Although breeding an Affected isn't ideal in all situations, IF it is bred to a Clear,
there will be no possibility of producing Fanconi Syndrome,
so the health of the puppies is not at risk in any way.

THE FOLLOWING BREEDINGS ARE NOT RECOMMENDED,
as each puppy from the resulting litters has a probability of being a Fanconi Affected.

FANCONI CARRIER BRED TO A FANCONI CARRIER:

	N	n
N	NN	Nn
n	Nn	nn

EACH PUPPY has a 25% chance of being Normal or Fanconi Clear (NN),
a 50% chance of being Fanconi Carrier (Nn),
and a 25% chance of being Fanconi Affected.
NOT A GOOD BREEDING.

FANCONI CARRIER BRED TO A FANCONI AFFECTED:

	n	n
N	Nn	Nn
n	nn	nn

EACH PUPPY has a 50% chance of being a Fanconi Carrier (Nn).
and a 50% chance of being a Fanconi Affected.
NOT A GOOD BREEDING.

FANCONI CARRIER BRED TO AN UNTESTED:

	?	?
N	N?	?
n	n?	?

EACH PUPPY has at least a 25% chance of being Fanconi Clear or Fanconi Carrier
(carrying at least one Normal gene),
the rest of the probability is unknown.
NOT A GOOD BREEDING.

UNTESTED BRED TO AN UNTESTED:

	?	?
?	?	?
?	?	?

All puppies genetic make-up is completely unknown.
Fanconi Syndrome could affect any, all, or none of them.
NOT A GOOD BREEDING... better to play Russian Roulette in Las Vegas!

A Fanconi Carrier or INDeterminate basenji makes just as good of a companion as does a Fanconi Clear basenji, so do not be misled that you cannot have them as companions.

*What matters is that they are FREE of Fanconi Syndrome.
None of these will become affected with Fanconi Syndrome during their lifetime.*

THERE IS ABSOLUTELY NO REASON TO BUY A PUPPY FROM A BREEDER THAT IS NOT FOLLOWING THE RECOMMENDED BREEDING PRACTICES SET FORTH BY THE BCOA HEALTH COMMITTEE.

Breeding AGAINST these practices is not only irresponsible, but it is NOT fair to the resulting puppies and their new owners!

PLEASE ask about other diseases that can affect your Basenji.
PRA-BJ1 is a simple recessive disease. Therefore, it would follow the SAME PATTERN OF INHERITANCE as Fanconi Syndrome.

PRA is another late-onset disease that is generally not diagnosed by ophthalmologic exam until ages 5-8 years. Why wait to find out when the direct gene test is only \$65?

Hip Dysplasia is not simple recessive disease, therefore it does not follow the above probabilities. BUT, there is absolutely NO reason to breed a basenji that is AFFECTED with HIP DYSPLASIA!

Anyone telling you otherwise is irresponsible in their breeding practices.

For info on Fanconi and how Khani's strives to produce only puppies that will never become afflicted with this disease, contact Kathy at bennyburnerbono@aol.com.